

C.OC # 143

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200 (509) 924-9200

(541) 383-9310

FAX 924->~

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(503) 906-9200

FAX 906-9210 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Bristal		INVOICE TO: Br	isto (TURN	AROUND	REQUEST in Business	Days*
REPORT TO: Anne Kvanquetter			13 13				c & Inorganic Analyses	
ADDRESS: Amchiter Island, Ah					10 7	5	4 3 2	1 < 1
					STD.		m Hydrocarbon Analyses	
PHONE: 907 - 770 - 0974 FAX:	770-0975	A			5		3 2 1	<1
PROJECT NAME: Amchithus		REQUEST	ED ANALYSES	<u> </u>	STL	OTHE	Please Specify	
PROJECT NUMBER: 21090	RACO PCRSC MALS BTREX							
SAMPLED BY: CRUM / ARK	DRO/RRO PAHS/PCBS MRTALS G-NC/BTEX	3			*Turnaro	und Requests l	ess than standard may incur Rusl	Charges
CLIENT SAMPLE SAMPLING	DRO DRUS DRUS DRUS	3			MATRIX	# OF		NCA V.O
IDENTIFICATION DATE/TIME	2 2 3				(W, S, O)	CONT.	COMMENTS	ID
1. OIAMA1103SL 7/3/01 1110	XXX				\$	3		
201AM ALL 0456 7/3/01 1115	XXX				S	3		
3.01AMAN 0586 7/3/01 1120	XXX				S	3		
4.01AM ALL OGSL 7/3/01 1125	XXX				S	3		
5.01AM ALLOTSL 7/3/01 1130	XXX				S	3		
6.01AM ALL OBS L 7/3/01 1135	XXX				S	3		
7.01AM A11 095L 7/2/01 (140	XXX				S	3		
8.01AM AN 10SL 7/3/01 1150	(X			S	1		
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PRINT NAME: Ame Krawell FIRM:	oristo!	DATE:	RECEIVED BY: Fachel	AHSAN R.	A ROPENS	(/	10/1	TE:7/6/01/12
PRINT NAME: MUSTAHSAN R FAR DOQUTIRM:	NCA	TIME:	PRINT NAME: Rache	1 Arriva	FIRM:	NOA		1E:18:40
ADDITIONAL REMARKS:	1007		, colon	777170100		10 OR	TEMP:	10.10
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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

1 December, 2001

Anne Krarawetter Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are the results of analyses for samples received by the laboratory on 07/06/01 18:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jerry Orlando

Project Manager/QA

In olarlo

Work Orders included in this report:

P1G0208



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01AMA11U03SL	P1G0208-01	Soil	07/03/01 11:10	07/06/01 18:40
)1AMA11U04SL	P1G0208-02	Soil	07/03/01 11:15	07/06/01 18:40
01AMA11U05SL	P1G0208-03	Soil	07/03/01 11:20	07/06/01 18:40
1AMA11U06SL	P1G0208-04	Soil	07/03/01 11:25	07/06/01 18:40
1AMA11U07SL	P1G0208-05	Soil	07/03/01 11:30	07/06/01 18:40
1AMA11U08SL	P1G0208-06	Soil	07/03/01 11:35	07/06/01 18:40
1AMA11U09SL	P1G0208-07	Soil	07/03/01 11:40	07/06/01 18:40
1AMA11U10SL	P1G0208-08	Other wet	07/03/01 11:40	07/06/01 18:40

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

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Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Not
01AMA11U03SL (P1G0208-01) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/	01	
Gasoline Range Organics	ND	3.35	mg/kg dry	1	AK101/8021B	07/12/01	07/12/01	1071199	
Benzene	ND	0.0837	"	"	74K101/6021B	07/12/01	07/12/01	10/1199	
Toluene	ND	0.0837			"	"	"		
Ethylbenzene	ND	0.0837	11	"	11	"	**	11	
Xylenes (total)	ND	0.0837	11	**	**	"		**	
Surr: a,a,a-TFT (FID)	109 %	60-140							
Surr: a,a,a-TFT (PID)	95.3 %	60-140							
01AMA11U04SL (P1G0208-02) Soil					Sampled: 07/03	3/01 Recei	ived: 07/06/) 1	
Gasoline Range Organics	ND	4.00	mg/kg dry	1	AK101/8021B	07/12/01	07/12/01	1071199	
Benzene	ND	0.100	"	ii .	"	"	07/12/01	10/1199	
Toluene	ND	0.100		**	**	"	11	11	
Ethylbenzene	ND	0.100	**	**	**	**	"	**	
Xylenes (total)	ND	0.100	11	**	**	"	"	11	
Surr: a,a,a-TFT (FID)	112 %	60-140							
Surr: a,a,a-TFT (PID)	94.7 %	60-140							
01AMA11U05SL (P1G0208-03) Soil					Sampled: 07/03	3/01 Recei	ived: 07/06/0	01	
Gasoline Range Organics	ND	3.51	mg/kg dry	1	AK101/8021B	07/12/01	07/12/01	1071199	
Benzene	ND	0.0877	"	**	11	0	"	"	
Toluene	ND	0.0877	**	"	11	0	**		
Ethylbenzene	ND	0.0877	n	u	"	11	"	**	
Xylenes (total)	ND	0.0877	**		"	11	**	II .	
Surr: a,a,a-TFT (FID)	113 %	60-140							
Surr: a,a,a-TFT (PID)	97.4 %	60-140							

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

				cui i (or cramer			•	
Analyte	Result	Reporting Limit		Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U06SL (P1G0208-04) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Gasoline Range Organics	ND	5.65	mg/kg dry						·
Benzene	ND	0.141	mg/kg ury	1	AK101/8021B	07/12/01	07/12/01	1071199	
Toluene	ND	0.141	"	"	"	**	"	"	
Ethylbenzene	ND	0.141	"	"	"	"	"	"	
Xylenes (total)	ND	0.141	"	,,	"	,,	"	"	
Surr: a,a,a-TFT (FID)	114 %	60-140							
Surr: a,a,a-TFT (PID)	98.3 %	60-140							
01AMA11U07SL (P1G0208-05) Soil					Sampled: 07/03	3/01 Rece	ived: 07/06/	Λ1	
Gasoline Range Organics	ND	2.15	mg/kg dry		AK101/8021B	07/12/01			
Benzene	ND	0.0538	"	"	AK101/8021B	07/12/01	07/12/01	1071199	
Toluene	ND	0.0538	**		*1	"	**	"	
Ethylbenzene	ND	0.0538	**	**		"		,,	
Xylenes (total)	ND	0.0538	"	11	**	**	"	"	
Surr: a,a,a-TFT (FID)	106 %	60-140							
Surr: a,a,a-TFT (PID)	91.3 %	60-140							
01AMA11U08SL (P1G0208-06) Soil					Sampled: 07/03	3/01 Recei	ived: 07/06/0	D1	
Gasoline Range Organics	ND	2.30	mg/kg dry	1	AK101/8021B	07/12/01	07/12/01	1071199	
Benzene	ND	0.0574	"	"	"	07/12/01	07/12/01	10/1199	
Toluene	ND	0.0574	II	**	Ħ	**	**	"	
Ethylbenzene	ND	0.0574	**		11	"	**	11	
Xylenes (total)	ND	0.0574	**	**	**	**	"	**	
Surr: a,a,a-TFT (FID)	99.4 %	60-140							
Surr: a,a,a-TFT (PID)	86.1 %	60-140							

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Bristol Environmental & Engineering

2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B North Creek Analytical - Portland

			 -						
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil					S 1 1 07/03				
Gasoline Range Organics					Sampled: 07/03	3/01 Rece	ived: 07/06/	01	
	ND	6.75	mg/kg dry	1	AK101/8021B	07/12/01	07/12/01	1051100	
Benzene	ND	0.169	"	R	71KT01/6021B		07/12/01	1071199	
Toluene					"	"	**	"	
Ethylbenzene	ND	0.169	"	"	11	**	**	*1	
	ND	0.169	**	11	**	**			
Xylenes (total)	ND	0.169	**	"	,,			n	
C TETT (TYP)		0.109				**	**	**	
Surr: a,a,a-TFT (FID)	108 %	60-140							
Surr: a,a,a-TFT (PID)	93.6 %	60-140							
, ,	73.0 70	00-140							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 North Creek Analytical - Portland

	110	th Citch	Tanaiyu	cai - P0	uana				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	N
01AMA11U03SL (P1G0208-01) Soil		-			Sampled: 07/0	3/01 Page	ived: 07/06/		
Diesel Range Organics	158	25.0	mg/kg dry	1					
Residual Range Organics	ND	50.0	" "	1 "	AK102/103	07/12/01	07/14/01	1071212	
Surr: 1-Chlorooctadecane	75.2 %	75-125							
Surr: Triacontane	105 %	50-150							
01AMA11U04SL (P1G0208-02) Soil				!	Sampled: 07/0	3/01 Rece	ived: 07/06/	0.1	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/12/01			
Residual Range Organics	ND	50.0	"	"	MX102/103	07/12/01	07/16/01	1071212	
Surr: 1-Chlorooctadecane	81.2 %	75-125							
Surr: Triacontane	112 %	50-150							
01AMA11U05SL (P1G0208-03) Soil				9	Sampled: 07/0	3/01 Recei	ved: 07/06/0	01	
Diesel Range Organics	ND	25.0	mg/kg dry	ī	AK102/103	07/12/01	07/16/01		
Residual Range Organics	ND	50.0	"	"	# H	U//12/UI	U//16/UI "	1071212	
Surr: 1-Chlorooctadecane	84.8 %	75-125							
Surr: Triacontane	121 %	50-150							
01AMA11U06SL (P1G0208-04) Soil			_	S	Sampled: 07/03	3/01 Recei	ved: 07/06/0	01	
Diesel Range Organics	28.4	25.0	mg/kg dry	1	AK102/103	07/12/01	07/16/01	1071212	
Residual Range Organics	60.8	50.0	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	82.6 %	75-125							
Surr: Triacontane	123 %	50-150							
1AMA11U07SL (P1G0208-05) Soil					Sampled: 07/03	3/01 Recei	ved: 07/06/0)1	
Diesel Range Organics	ND	25.0	mg/kg dry	1	AK102/103	07/12/01	07/16/01	1071212	
Residual Range Organics	ND	50.0	"	**	n .	11	н	"	
Surr: 1-Chlorooctadecane	83.8 %	75-125							
Surr: Triacontane	116 %	50-150							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 North Creek Analytical - Portland

				I CACCALCA				
Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
				Sampled: 07/0	3/01 Page	ived: 07/06/	01	
ND ND	25.0 50.0	mg/kg dry	1	AK102/103	07/12/01	07/16/01	1071212	
86.2 % 129 %	75-125 50-150					<u>"</u>		
			9	Sampled: 07/0	3/01 Rece	ived: 07/06/	∩1	
34.6 ND	25.0 50.0	mg/kg dry	1	AK102/103	07/12/01	07/16/01	1071212	
87.9 % 128 %	75-125 50-150							
	ND ND 86.2 % 129 % 34.6 ND 87.9 %	ND 25.0 ND 50.0 86.2 % 75-125 129 % 50-150 34.6 25.0 ND 50.0 87.9 % 75-125	ND 25.0 mg/kg dry ND 50.0 "	Result Limit Units Dilution ND 25.0 mg/kg dry 1 ND 50.0 " " 86.2 % 75-125 129 % 50-150 34.6 25.0 mg/kg dry 1 ND 50.0 " " 87.9 % 75-125	Result Limit Units Dilution Method Sampled: 07/0 ND 25.0 mg/kg dry 1 AK102/103 ND 50.0 " " " " 86.2 % 75-125 129 % 50-150 Sampled: 07/0 34.6 25.0 mg/kg dry 1 AK102/103 ND 50.0 " " " AK102/103 ND 50.0 " " " " " "	Result Reporting Limit Units Dilution Method Prepared Sampled: 07/03/01 Rece ND 25.0 mg/kg dry 1 AK102/103 07/12/01 ND 50.0 " " " " 86.2 % 75-125 129 % 50-150 Sampled: 07/03/01 Rece 34.6 25.0 mg/kg dry 1 AK102/103 07/12/01 ND 50.0 " " " " 87.9 % 75-125 " " " "	Result Reporting Limit Units Dilution Method Prepared Analyzed Sampled: 07/03/01 Received: 07/06/05 ND 25.0 mg/kg dry 1 AK102/103 07/12/01 07/16/01 86.2 % 75-125 129 % 50-150 " " " " " Sampled: 07/03/01 Received: 07/06/01 AK102/103 07/12/01 07/16/01 ND 50.0 "	Result Reporting Limit Units Dilution Method Prepared Analyzed Batch Sampled: 07/03/01 Received: 07/06/01 ND 25.0 mg/kg dry 1 AK102/103 07/12/01 07/16/01 1071212 ND 50.0 " " " " " " " " " " " " " " " " " "

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

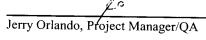
Reported:

07/31/01 12:31

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

		Tortiand								
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note	
01AMA11U03SL (P1G0208-01) Soil					Sampled: 07/0)3/01 Page	ived: 07/06/	0.1		
Arsenic	3.65	0.500	mg/kg dry	1						
Barium	76.4	1.00	"	10	EPA 6020	07/19/01	07/26/01	1071443		
Cadmium	ND	0.500	**	"		,,	07/24/01	11		
Chromium	5.11	0.500	"	"	#		"	11		
Lead	5.42	0.500	Ħ	"	"	**	**	11		
Nickel	10.2	1.00	"	"	"	***	"	"		
Vanadium	98.7	2.50	**	1	"	"	"	"		
01AMA11U04SL (P1G0208-02) Soil				S	ampled: 07/0	13/01 Daggi	ived: 07/06/0	\1		
Arsenic	3.12	0.500	mg/kg dry							
Barium	58.9	1.00	mg/kg ury	1 10	EPA 6020	07/19/01	07/26/01	1071443		
Cadmium	ND	0.500	**	10	"	" .	07/24/01	11		
Chromium	5.93	0.500	"	11	"		**	11		
Lead	5.99	0.500	"	••	"	**	"	11		
Nickel	9.11	1.00	"	**	"	"	"	"		
Vanadium	108	2.50		1	"	"	"	**		
01AMA11U05SL (P1G0208-03) Soil				S	ampled: 07/0	3/01 Recei	ved: 07/06/0	11		
Arsenic	3.15	0.500	mg/kg dry	1	EPA 6020	07/19/01				
Barium	61.1	1.00	" "	10	EFA 0020	0//19/01 "	07/26/01	1071443		
Cadmium	ND	0.500	**	"	**		07/24/01	**		
Chromium	4.45	0.500	,,	n	**	"	**	"		
Lead	5.66	0.500	"	**	**	,,	"	"		
Nickel	5.92	1.00	,,	**	,,	"	"	,,		
Vanadium	57.9	2.50					**	"		

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Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

		- Creek	1 maiy ti	<u> </u>	luanu				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U06SL (P1G0208-04) Soil			,		Sampled: 07/0)2/01 D	1 07/06/		
Arsenic	5.07	0.500					ived: 07/06/0	01	
Barium	103	1.00	mg/kg dry "	1	EPA 6020	07/19/01	07/26/01	1071443	
Cadmium	ND	0.500		10	**	"	07/24/01	**	
Chromium	4.93	0.500	"	"	"	**	n	"	
Lead	11.3	0.500	" "	"	**	II .	11	**	
Nickel	7.44	1.00	"	"	**	**	"	"	
Vanadium	114	2.50	#	1	"	"	"	"	
01AMA11U07SL (P1G0208-05) Soil				9	ampled: 07/0	12/01 Daggi	J. 07/0 <i>/</i> /0		
Arsenic	2.49	0.500	mg/kg dry	- <u> </u>	EPA 6020		ved: 07/06/0		
Barium	59.5	1.00	mg/kg tily	10	EPA 6020	07/19/01	07/26/01	1071443	
Cadmium	ND	0.500	,,	"	"	"	07/24/01	***	
Chromium	6.61	0.500	**	"	11	"	"	"	
Lead	4.11	0.500		**	"	"	**	11	
Nickel	9.90	1.00	,,	11	"	"	"	"	
Vanadium	129	2.50	**	1	"	11	"	"	
01AMA11U08SL (P1G0208-06) Soil				S	ampled: 07/0	3/01 Recei	ved: 07/06/0	11	
Arsenic	1.69	0.500	mg/kg dry	1	EPA 6020	07/19/01	07/26/01	1071443	
Barium	24.0	1.00	"	10	U U	# H	07/24/01	10/1 44 3	
Cadmium	ND	0.500	n	"	0	"	07/24/01	11	
Chromium	2.49	0.500	**	"	rr ·	u	ıı.	11	
Lead	1.96	0.500	11	**	11		**	"	
Nickel	8.65	1.00		"	**	11	"	"	
Vanadium	94.1	2.50	"	1	"	H	"	"	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Total Metals per EPA 6000/7000 Series Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil				S	Sampled: 07/0	03/01 Rece	ived: 07/06/	01	
Arsenic	4.43	0.500	mg/kg dry	1	EPA 6020	07/19/01	07/26/01		
Barium	97.0	1.00	"	10	"	"	07/24/01	1071443	
Cadmium	ND	0.500	**	**	"		07/24/01 #	,,	
Chromium	5.82	0.500	n		**	*1	11	**	
Lead	9.76	0.500	**	**		**	,,	11	
Nickel	9.46	1.00	"	"	11	"	**	**	
Vanadium	114	2.50	н	1	н	**	.,		

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polychlorinated Biphenyls per EPA Method 8082 North Creek Analytical - Portland

	NOI	rtn Creek	Analyti	ical - Po	rtland				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U03SL (P1G0208-01) Soil					Sampled: 07/6	03/01 Ross		10.1	
Aroclor 1016	ND	67.0	ug/kg dry				eived: 07/06/		
Aroclor 1221	ND	134	ug/kg uly	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1232	ND	67.0	н	**	"		"	"	
Aroclor 1242	ND	67.0	"	**	"	"	"	**	
Aroclor 1248	ND	67.0	**	,,	"		"	"	
Aroclor 1254	ND	67.0	"	11	" "	"	11	"	
Aroclor 1260	ND	67.0	"	**	,,	"	"	11	
Surr: 2,4,5,6-Tetrachloro-m-xylene	82.0 %	63-119					"	"	
Surr: Decachlorobiphenyl	109 %	52-131							
01AMA11U04SL (P1G0208-02) Soil				S	Sampled: 07/0)3/01 Rece	ived: 07/06/	0.1	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082				
Aroclor 1221	ND	134	ug/kg ury	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1232	ND	67.0		**	**	"	"	"	
Aroclor 1242	ND	67.0	"	11	,,	,,	,,	"	
Aroclor 1248	ND	67.0	11	**	11			"	
Aroclor 1254	ND	67.0	**	**	11	11	11	"	
Aroclor 1260	ND	67.0		"	11	*1	11	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	89.3 %	63-119							
Surr: Decachlorobiphenyl	109 %	52-131							
01AMA11U05SL (P1G0208-03) Soil				S	ampled: 07/0	3/01 Recei	ved: 07/06/0)1	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1221	ND	134	"	"	E1 A 6062	07/14/01 #	11/18/01	10/1259	
Aroclor 1232	ND	67.0	"	**	u	11	**	11	
Aroclor 1242	ND	67.0	"	**	u	**	"	"	
Aroclor 1248	ND	67.0	"	**	11	11	"	**	
Aroclor 1254	ND	67.0		**	11	"	11	#	
Aroclor 1260	ND	67.0	**	**	**	**	**	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	96.6 %	63-119							
Surr: Decachlorobiphenyl	113 %	52-131							
• •		101							

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Jerry Orlando, Project Manager/QA

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

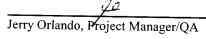
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polychlorinated Biphenyls per EPA Method 8082 North Creek Analytical - Portland

	1101	и Стеек	Anaiyu	cai - Po	rtiand				
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U06SL (P1G0208-04) Soil					Sampled: 07/0)3/01 Pece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082				
Aroclor 1221	ND	134	ug/kg ury	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1232	ND	67.0	**	**	,,	"	"	"	
Aroclor 1242	ND	67.0		"	"	"	"	"	
Aroclor 1248	ND	67.0	**	**		"	"	"	
Aroclor 1254	ND	67.0	"	"	**	,,	"	"	
Aroclor 1260	ND	67.0	"	11	**	"	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	84.9 %	63-119							
Surr: Decachlorobiphenyl	103 %	52-131							
01AMA11U07SL (P1G0208-05) Soil				S	Sampled: 07/0	3/01 Recei	ved: 07/06/0) 1	
Aroclor 1016	ND	67.0	ug/kg dry						
Aroclor 1221	ND	134	ug/kg ury	1	EPA 8082	07/14/01	07/18/01	1071259	
Aroclor 1232	ND	67.0	,,	**	"	"	"	**	
Aroclor 1242	ND	67.0	**	н		" "	"	"	
Aroclor 1248	ND	67.0	**	,,	**	"	"	"	
Aroclor 1254	ND	67.0	11	tr	"	11	**	"	
Aroclor 1260	ND	67.0	"	11	n	11	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	87.5 %	63-119							
Surr: Decachlorobiphenyl	110 %	52-131							
01AMA11U08SL (P1G0208-06) Soil				S	ampled: 07/0	3/01 Recei	ved: 07/06/0)1	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/14/01	07/18/01	1071259	-
Aroclor 1221	ND	134	" "	1 11	EFA 6062	07/1 4 /01	0//18/01	10/1259	
Aroclor 1232	ND	67.0	u	**		**	**	**	
Aroclor 1242	ND	67.0	**	**	**	**		**	
Aroclor 1248	ND	67.0	**	н	**		u		
Aroclor 1254	ND	67.0	"	n	**	11	11	11	
Aroclor 1260	ND	67.0	**	11	**	11	"	**	
Surr: 2,4,5,6-Tetrachloro-m-xylene	82.9 %	63-119							
Darr. 2, 7,5,0 1 ch acmor o-m-xylene	04.77	01-114							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

Polychlorinated Biphenyls per EPA Method 8082 North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil					Sampled: 07/0	03/01 Rece	ived: 07/06/	01	
Aroclor 1016	ND	67.0	ug/kg dry	1	EPA 8082	07/14/01			
Aroclor 1221	ND	134	"	"	EI A 8082	07/14/01	07/18/01	1071259	
Aroclor 1232	ND	67.0	**	**	**		**	**	
Aroclor 1242	ND	67.0	"	"	**	**			
Aroclor 1248	ND	67.0		**	**		"		
Aroclor 1254	ND	67.0	"	**	**	**	"	11	
Aroclor 1260	ND	67.0	"	**		"	"	"	
Surr: 2,4,5,6-Tetrachloro-m-xylene	89.4 %	63-119							
Surr: Decachlorobiphenyl	104 %	52-131							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U03SL (P1G0208-01) Soil					Sampled: 07/0	<u> </u>	ived: 07/06/0		Note
Acetone	ND	2090	ug/kg dry						 -
Benzene	ND	83.7	ug/kg ury	1	EPA 8260B	07/16/01	07/16/01	1071301	
Bromobenzene	ND	83.7	11	**		"	"	**	
Bromochloromethane	ND	83.7	"	**	11	**	11	"	
Bromodichloromethane	ND	83.7 83.7	"	"	"	"	"	Ħ	
Bromoform	ND	83.7	**	"	"	"	"	**	
Bromomethane	ND	418	,,	"	"	"	11	"	
2-Butanone	ND	837	"	"	"	"	"	"	
n-Butylbenzene	ND	418	,,	"	" "	**	**	11	
sec-Butylbenzene	ND	83.7		"	"	**	"	"	
tert-Butylbenzene	ND	83.7	**	11	,,	11	. "	"	
Carbon disulfide	ND	83.7	**	"	"	***	H	"	
Carbon tetrachloride	ND	83.7	**	. "		"	1)	"	
Chlorobenzene	ND ND	83.7		"		n	11	"	
Chloroethane	ND ND	83.7 83.7	"	"	tt	**	"	n	
Chloroform	ND ND	83.7 83.7	**	**		**	"	"	
Chloromethane	ND ND	83.7 418	**	,,	"	"	"	"	
2-Chlorotoluene	ND ND	83.7	"	,,	**	"	"	"	
4-Chlorotoluene	ND ND	83.7	,,	**	"	"	"	**	
1,2-Dibromo-3-chloropropane	ND ND	418	,,	**	"		**	***	
Dibromochloromethane	ND ND	83.7	"	"	"	"	"	**	
1,2-Dibromoethane	ND	83.7	"	"	"	"		11	
Dibromomethane	ND ND		"	"	"	"	11	**	
1,2-Dichlorobenzene	ND ND	83.7	"	"			"	"	
1,3-Dichlorobenzene	ND ND	83.7	"	,,	"	"	"	"	
,4-Dichlorobenzene	ND ND	83.7 83.7	"	"	"	"	"	11	
Dichlorodifluoromethane	ND ND	65.7 418	"		"	"	"	"	
,1-Dichloroethane	ND	83.7	11	**	"	"	"	"	
,2-Dichloroethane	ND	83.7	11			"	**	"	
,1-Dichloroethene	ND	83.7	**	,,	**	**	,,	,,	
cis-1,2-Dichloroethene	ND	83.7		,,	"	,,	**	,,	
rans-1,2-Dichloroethene	ND	83.7	**	**	"	**	"	"	
,2-Dichloropropane	ND	83.7	**	11	,,	,,		**	
,3-Dichloropropane	ND	83.7	"	"	,,	,,	"	"	
2,2-Dichloropropane	ND	83.7	**	n	"	"	**	"	
,1-Dichloropropene	ND	83.7	*1	11	"	**	"	"	
is-1,3-Dichloropropene	ND	83.7		"	"	"	"	"	
rans-1,3-Dichloropropene	ND ND	83.7	"	"	"	"	"	"	
Ethylbenzene	ND	83.7	**	"	"	"	"	**	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

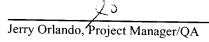
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U03SL (P1G0208-01) Soil				,	Sampled: 07/0	3/01 Peggi	ived: 07/06/0		
Hexachlorobutadiene	ND	167	ug/kg dry	1	EPA 8260B				
2-Hexanone	ND	837	ug/kg uly	,,	EPA 8260B	07/16/01	07/16/01	1071301	
Isopropylbenzene	ND	167	"	11		"	"	11	
o-Isopropyltoluene	ND	167	n	**	"	"	"	**	
4-Methyl-2-pentanone	ND	418	"	**	**	"	"	"	
Methyl tert-butyl ether	ND	83.7	**	,,	**	,,	"		
Methylene chloride	ND	418	"	"	"	**	"	"	
Naphthalene	ND	167	**	**	#		"	"	
n-Propylbenzene	ND	83.7	"	"	**	**	"		
Styrene	ND	83.7	**	11	**	"	"	"	
,1,1,2-Tetrachloroethane	ND	83.7	,,	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	83.7	0	"	"	**	"	"	
Tetrachloroethene	ND	83.7		"	"	"	"	"	
Гoluene	ND	83.7	**	"	**	,,	,,	**	
,2,3-Trichlorobenzene	ND	83.7	**	"	"	,,	"		
,2,4-Trichlorobenzene	ND	83.7	**	11	"	"	"	"	
,1,1-Trichloroethane	ND	83.7	**	**	**	"	11	**	
1,1,2-Trichloroethane	ND	83.7	#	**	"	"	"	,,	
Trichloroethene	ND	83.7	"	**	"	"	H	,,	
[richlorofluoromethane	ND	83.7	"	"	,,	11	"		
,2,3-Trichloropropane	ND	83.7	"	tt	"	**	"	**	
,2,4-Trimethylbenzene	ND	83.7	11	**	11	"		**	
,3,5-Trimethylbenzene	ND	83.7	**	Ħ	**	"	"	**	
Vinyl chloride	ND	83.7	11	**	***	"	11		
o-Xylene	ND	83.7	u u	"	**	"	**		
n,p-Xylene	ND	167	11	"		**	**	"	
Surr: 4-BFB	96.3 %	70-130							
Surr: 1,2-DCA-d4	80.7 %	70-130							
Surr: Dibromofluoromethane	84.0 %	70-130							
Surr: Toluene-d8	96.8 %	70-130							

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Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U04SL (P1G0208-02) Soil					Sampled: 07/0				Note
Acetone	ND	2500	ug/kg dry				ved: 07/06/0		
Benzene	ND	100	ug/kg ury	1	EPA 8260B	07/16/01	07/16/01	1071301	
Bromobenzene	ND	100	**		"	"	**	Ħ	
Bromochloromethane	ND	100	"	,,	"	**	"	"	
Bromodichloromethane	ND	100	"			"	*1	**	
Bromoform	ND	100	"	**	**	"	11	u	
Bromomethane	ND	500	"	"	"	**	"	**	
2-Butanone	ND	1000	tt	"		11	n	"	
1-Butylbenzene	ND	500	"	"	"	**	"	11	
sec-Butylbenzene	ND	100	**	"	"	**	11	"	
ert-Butylbenzene	ND	100	,,	"	"	**	"	**	
Carbon disulfide	ND	1000	11	"	"	"	11	11	
Carbon tetrachloride	ND	1000	"	"		***	Ħ	**	
Chlorobenzene	ND		,,	"	**	11	11	"	
Chloroethane	ND	100	**	"	**	"	***	"	
Chloroform	ND ND	100	"	"	"	11	"	"	
Chloromethane	ND ND	100			11	**	и	"	
2-Chlorotoluene	ND ND	500 100	"	"	**	"	n	***	
I-Chlorotoluene	ND ND	•	"	,,	*1	"	**	11	
,2-Dibromo-3-chloropropane	ND ND	100 500	"	**	"	n	"	"	
Dibromochloromethane	ND ND	100	"	"	"	n	**	11	
,2-Dibromoethane	ND ND	100	,,	"	"	"	"	**	
Dibromomethane	ND ND	100	"		"	"		**	
,2-Dichlorobenzene	ND	100	"	"	**	"	"	**	
,3-Dichlorobenzene	ND	100	,,	,,	**	"	"	"	
,4-Dichlorobenzene	ND	100	"	11			,,	,,	
Dichlorodifluoromethane	ND ND	500	"	,,	" U	"	"	,,	
,1-Dichloroethane	ND	100	**	,,	"	"	. "		
,2-Dichloroethane	ND	100	"	"	"	"	"		
,1-Dichloroethene	ND	100	"	"		,,	"	"	
ris-1,2-Dichloroethene	ND	100	"	"	"	··	,,	"	
rans-1,2-Dichloroethene	ND	100	**	11	"	11	,,	"	
,2-Dichloropropane	ND	100	11	n.	,,			"	
,3-Dichloropropane	ND	100	**	"	,,		**	"	
,2-Dichloropropane	ND	100	"	"	11	**		"	
,1-Dichloropropene	ND	100	"	11	"	**	"	"	
is-1,3-Dichloropropene	ND	100	"	**	"	"	"	"	
rans-1,3-Dichloropropene	ND	100	11	**	**	"	"		
Ethylbenzene	ND ND	100			"	,,	"	"	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U04SL (P1G0208-02) Soil				-	Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Hexachlorobutadiene	ND	200	ug/kg dry	1	EPA 8260B	07/16/01			
2-Hexanone	ND	1000	"	11	EFA 8200B	0//16/01	07/16/01	1071301	
sopropylbenzene	ND	200	**	11	,,		"	**	
o-Isopropyltoluene	ND	200	n	**	**	,,	"	"	
1-Methyl-2-pentanone	ND	500	tt	"	,,		"	"	
Methyl tert-butyl ether	ND	100	n	**	"	**	"	"	
Methylene chloride	ND	500	11	n n	"	"	11	**	
Naphthalene	ND	200	"	**	**	**	"	,,	
n-Propylbenzene	ND	100	"	**	n	**	,,		
Styrene	ND	100	**	"	"	11	**	**	
,1,1,2-Tetrachloroethane	ND	100	n	Ħ	"	"	,,	"	
,1,2,2-Tetrachloroethane	ND	100	11	"	**		11	**	
Tetrachloroethene	ND	100	*1	,,	n	11	"	"	
Toluene	ND	100	"	**	"	*1	,,	"	
,2,3-Trichlorobenzene	ND	100	n	**	"	"	"	**	
,2,4-Trichlorobenzene	ND	100	**	"	11		11	"	
,1,1-Trichloroethane	ND	100	**	"	"	"	tı	**	
,1,2-Trichloroethane	ND	100		**	**	**	**	,,	
Trichloroethene	ND	100	**	**	**	"	11		
richlorofluoromethane	ND	100	**	**	,,	"	11	**	
,2,3-Trichloropropane	ND	100	**	"		n	"	**	
,2,4-Trimethylbenzene	ND	100	**	11		**	Ħ	**	
,3,5-Trimethylbenzene	ND	100		**	11	tt	"	**	
/inyl chloride	ND	100	0	**	**	**	"		
-Xylene	ND	100	**	11	***	**	**	,,	
n,p-Xylene	ND	200	tt	n	**	#1	**	"	
Surr: 4-BFB	94.4 %	70-130							
Surr: 1,2-DCA-d4	79.1 %	70-130							
Surr: Dibromofluoromethane	82.1 %	70-130							
Surr: Toluene-d8	95.4 %	70-130							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

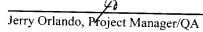
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U05SL (P1G0208-03) Soil					Sampled: 07/0		ived: 07/06/0		11010
Acetone	ND	2190	ug/kg dry						
Benzene	ND	87.7	ug/kg ury	1	EPA 8260B	07/16/01	07/16/01	1071301	
Bromobenzene	ND	87.7	11		"	"	"	11	
Bromochloromethane	ND	87.7	**	**		"	"	n	
Bromodichloromethane	ND	87.7	11	*1	"	"		"	
Bromoform	ND	87.7	"		"	"	"	11	
Bromomethane	ND	439	,,	**	"	"	"	11	
2-Butanone	ND	877	"	,,	"		"	"	
n-Butylbenzene	ND	439	**	"	" "	**	**	11	
sec-Butylbenzene	ND	87.7	"	**	"	"	"	"	
tert-Butylbenzene	ND ND	87.7 87.7		,,	"	"	11	Ħ	
Carbon disulfide	ND	87.7 877	"	"	"	"	**	m .	
Carbon tetrachloride	ND	87.7	"	"	"	"	"	11	
Chlorobenzene	ND	87.7	,,		"	"	**	ff .	
Chloroethane	ND	87.7		n	"	"	**	"	
Chloroform	ND	87.7	**	,,		**	"	"	
Chloromethane	ND	439	"	**	,	"	"	**	
2-Chlorotoluene	ND	87.7	**	"	,,	"	"	"	
4-Chlorotoluene	ND	87.7	**		"	,,	"	"	
1,2-Dibromo-3-chloropropane	ND	439	,,	**	**	"	"	"	
Dibromochloromethane	ND	87.7	**	**		"	"	11	
1,2-Dibromoethane	ND	87.7	**	**	0	,,	"	"	
Dibromomethane	ND	87.7	**	**	**		" "	"	
1,2-Dichlorobenzene	ND	87.7		**	71	"	"	"	
1,3-Dichlorobenzene	ND	87.7			"	"	"	**	
1,4-Dichlorobenzene	ND	87.7	11		"	#1		"	
Dichlorodifluoromethane	ND	439	11	**	**	*11	n	11	
1,1-Dichloroethane	ND	87.7	u	tt	"	"	u	**	
1,2-Dichloroethane	ND	87.7	"	11	"	"	**		
1,1-Dichloroethene	ND	87.7	**	110	"	"	"	,,	
cis-1,2-Dichloroethene	ND	87.7	**	"	"	Ħ	,,		
rans-1,2-Dichloroethene	ND	87.7	"	**	**	"	,,		
1,2-Dichloropropane	ND	87.7	**	**	u	"	**	"	
1,3-Dichloropropane	ND	87.7	n	11	"	"	"	"	
2,2-Dichloropropane	ND	87.7	"	**	**	,,	**	"	
1,1-Dichloropropene	ND	87.7	11	n .	"	11	**	"	
eis-1,3-Dichloropropene	ND	87.7	"	11	**	**		"	
rans-1,3-Dichloropropene	ND	87.7	**	"	ı,	"	"	"	
Ethylbenzene	ND	87.7	,,	.,	,,	"	"	"	

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U05SL (P1G0208-03) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0	 01	· · · · · · · · · · · · · · · · · · ·
Hexachlorobutadiene	ND	175	ug/kg dry	1	EPA 8260B	07/16/01	07/16/01	1071301	
2-Hexanone	ND	877	"	,,	"	11	07/10/01	10/1301	
Isopropylbenzene	ND	175		"	11	"	**	,,	
p-Isopropyltoluene	ND	175	#	**	••	"	"	**	
4-Methyl-2-pentanone	ND	439	**		tt	11	"	**	
Methyl tert-butyl ether	ND	87.7	"	**	**	"	#	11	
Methylene chloride	ND	439	n	11		**	"	**	
Naphthalene	ND	175			**	"	**	"	
n-Propylbenzene	ND	87.7	n	**	**	"	"	"	
Styrene	ND	87.7	**	"	**	**	u.	,,	
1,1,1,2-Tetrachloroethane	ND	87.7	**	11	#	"	**	11	
1,1,2,2-Tetrachloroethane	ND	87.7	"	**	"	11	"	11	
Tetrachloroethene	ND	87.7	**	"	11	**	**	"	
Toluene	ND	87.7	"	"	**	"	"	**	
1,2,3-Trichlorobenzene	ND	87.7	n	**	n	**	,,	**	
1,2,4-Trichlorobenzene	ND	87.7	**	"	n.	,,	**	"	
1,1,1-Trichloroethane	ND	87.7	"	**	**	0	**	**	
1,1,2-Trichloroethane	ND	87.7	11	"	"	**	"	**	
Trichloroethene	ND	87.7	**	"	"	**	**	11	
Trichlorofluoromethane	ND	87.7	"	**	"		**	**	
1,2,3-Trichloropropane	ND	87.7	**	11	"	n	"	"	
1,2,4-Trimethylbenzene	ND	87.7	"	"	**	11	**		
1,3,5-Trimethylbenzene	ND	87.7	"	"	**	"	,,	**	
Vinyl chloride	ND	87.7	**	#1		**	,,	"	
o-Xylene	ND	87.7	**	**		**	11	,,	
m,p-Xylene	ND	175	**	**	n	"	11	n	
Surr: 4-BFB	98.4 %	70-130							
Surr: 1,2-DCA-d4	79.8 %	70-130							
Surr: Dibromofluoromethane	83.5 %	70-130							
Surr: Toluene-d8	95.7 %	70-130							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U06SL (P1G0208-04) Soil				,	Sampled: 07/0	•	ved: 07/06/0		11010
Acetone	ND	3530	ug/kg dry	1	EPA 8260B				
Benzene	ND	141	ug/kg ury	"	EFA 8200B	07/16/01	07/16/01	1071301	
Bromobenzene	ND	141		,,		"	"	"	
Bromochloromethane	ND	141	"	**	"	"	"	"	
Bromodichloromethane	ND	141	"	**	**	"	"	,,	
Bromoform	ND	141	"	H	**	"	**	"	
Bromomethane	ND	706	Ħ	11	"		"	"	
2-Butanone	ND	1410	"	**	,,	**	"		
n-Butylbenzene	ND	706	"	11	"	,,	,,	**	
sec-Butylbenzene	ND	141	11	,,	. "	,,	"	rı	
ert-Butylbenzene	ND	141	"	"	"	"	"		
Carbon disulfide	ND	1410	**	**	**	"		**	
Carbon tetrachloride	ND	141	"	"	"	"	"	"	
Chlorobenzene	ND	141	**	"	"		"	11	
Chloroethane	ND	141	"	"	"	"	,,	**	
Chloroform	ND	141	,,	"	,,	"	"	"	
Chloromethane	ND	706	"	n	"	,,	"		
2-Chlorotoluene	ND	141	***	,,		"	"	**	
l-Chlorotoluene	ND	141	11	H		"	"	"	
,2-Dibromo-3-chloropropane	ND	706		,,	"	"	"	"	
Dibromochloromethane	ND ND	141	,,	11	"	"		Ħ	
,2-Dibromoethane	ND ND	141	**	**	,,	"	"	"	
Dibromomethane	ND ND	141	"	**		"	"	"	
,2-Dichlorobenzene	ND ND	141	"	,,	"	"	"	"	
,3-Dichlorobenzene	ND ND	141			,,	"	"	*1	
,4-Dichlorobenzene	ND	141	"	"	"	,,	"	,,	
Dichlorodifluoromethane	ND	706	**	#	**	"	"	,,	
,1-Dichloroethane	ND	141	**	**	11	11	,,	"	
,2-Dichloroethane	ND	141	**	11	"	**	"	"	
,1-Dichloroethene	ND	141	u u	,,		"	**	,,	
is-1,2-Dichloroethene	ND	141	"	**		**	11	"	
rans-1,2-Dichloroethene	ND	141	11	**	,,	" U		,,	
,2-Dichloropropane	ND	141	"	,,	"	"	"	"	
,3-Dichloropropane	ND	141	**	"	"	"	"	"	
,2-Dichloropropane	ND ND	141	11	11	"	"	"	"	
,1-Dichloropropene	ND	141	"	"		"	"	"	
is-1,3-Dichloropropene	ND ND	141	"		"	,,	**	"	
rans-1,3-Dichloropropene	ND	141	"		"	"	"		
thylbenzene	ND ND	141	"	"	"	"	"	**	

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U06SL (P1G0208-04) Soil					Sampled: 07/0	3/01 Recei	ved: 07/06/0	01	
Hexachlorobutadiene	ND	283	ug/kg dry	1	EPA 8260B	07/16/01	07/16/01	1071301	
2-Hexanone	ND	1410	"	"	"	11	"	10/1301	
Isopropylbenzene	ND	283	"	"	**	**	"	•	
p-Isopropyltoluene	ND	283	**	"	**	**	**	R	
4-Methyl-2-pentanone	ND	706	**	"	**	**	**	**	
Methyl tert-butyl ether	ND	141	**	11	*1	**	"	**	
Methylene chloride	ND	706	**	**	**		ıı	11	
Naphthalene	ND	283	"	"	**	"	n	**	
n-Propylbenzene	ND	141		11	ff	**	"		
Styrene	ND	141	11	"	n		**		
1,1,1,2-Tetrachloroethane	ND	141	11	"	51	**	**	11	
1,1,2,2-Tetrachloroethane	ND	141	n	"	n	"	**	**	
Tetrachloroethene	ND	141	***	**	**	**	*1	**	
Toluene	ND	141	**	**		"	"	**	
1,2,3-Trichlorobenzene	ND	141	11	Ħ	**		"	*1	
1,2,4-Trichlorobenzene	ND	141	11	Ħ	**	"	**	*1	
1,1,1-Trichloroethane	ND	141	u	"	***	11	**	"	
1,1,2-Trichloroethane	ND	141	u u	"	Ħ	**	**	"	
Trichloroethene	ND	141	u		*1	**	**	"	
Trichlorofluoromethane	ND	141	m	**	**	"	"	**	
1,2,3-Trichloropropane	ND	141	"	**	"	"		**	
1,2,4-Trimethylbenzene	ND	141	**	**	"	ij		**	
1,3,5-Trimethylbenzene	ND	141	"	*1	11	"		"	
Vinyl chloride	ND	141	"	*1	11	"	.,	**	
o-Xylene	ND	141	"	11	"	"	"	"	
m,p-Xylene	ND	283	**	**	u	"	0	"	
Surr: 4-BFB	96.7 %	70-130							
Surr: 1,2-DCA-d4	80.4 %	70-130							
Surr: Dibromofluoromethane	85.8 %	70-130							
Surr: Toluene-d8	98.2 %	70-130							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U07SL (P1G0208-05) Soil			-		Sampled: 07/0	3/01 Rece	ived: 07/06/		
Acetone	ND	1350	ug/kg dry	1	EPA 8260B	07/16/01			
Benzene	ND	53.8	"	"	" "	07/16/01	07/17/01	1071301	
Bromobenzene	ND	53.8	**	"	,,	"		"	
Bromochloromethane	ND	53.8	"	**	11	"	"	"	
Bromodichloromethane	ND	53.8	**	**	11	"	"	,,	
Bromoform	ND	53.8	**	u	**	"	**	**	
Bromomethane	ND	269	"	**	**	**	"	,,	
2-Butanone	ND	538	**	11	"	,,	" "	,,	
n-Butylbenzene	ND	269	11	"	**	"	"		
ec-Butylbenzene	ND	53.8	.,	**	"	"	. "	"	
ert-Butylbenzene	ND	53.8	11	**		"	"	***	
Carbon disulfide	ND	538	**	.,	"	"	"	**	
Carbon tetrachloride	ND	53.8		Ir	"		"	"	
Chlorobenzene	ND	53.8	11	**	,,	,,	"	"	
Chloroethane	ND	53.8	**	"	,,	,,	"	"	
Chloroform	ND	53.8	**	11	"	11	,,	"	
Chloromethane	ND	269	"	"	,,	**		"	
-Chlorotoluene	ND	53.8	**	**		"	**	"	
-Chlorotoluene	ND	53.8	"	11	**	11		"	
,2-Dibromo-3-chloropropane	ND	269		11		**	"	"	
Dibromochloromethane	ND	53.8	**	"		"	**	"	
,2-Dibromoethane	ND	53.8	**		**	**		"	
Dibromomethane	ND	53.8		**		,,	" "	"	
,2-Dichlorobenzene	ND	53.8	**	,,	11		**	"	
,3-Dichlorobenzene	ND	53.8	**	"	**	"	,,	"	
,4-Dichlorobenzene	ND	53.8	**		**	11	"		
Dichlorodifluoromethane	ND	269	,,	**	**	"		11	
,1-Dichloroethane	ND	53.8	11	**		**	11	"	
,2-Dichloroethane	ND	53.8	**	"	**	"	"	"	
,1-Dichloroethene	ND	53.8	**	**	"	"	"	"	
is-1,2-Dichloroethene	ND	53.8		**	**	"	"	**	
rans-1,2-Dichloroethene	ND	53.8	**	**		,,	"	11	
,2-Dichloropropane	ND ND	53.8	**	,,		"	"	"	
,3-Dichloropropane	ND ND	53.8	,,	" n	"	"	"	"	
,2-Dichloropropane	ND ND	53.8	11	11	"	"	"	"	
,1-Dichloropropene	ND	53.8	**	"	"	"	" "	"	
is-1,3-Dichloropropene	ND	53.8			**	" "	"	"	
rans-1,3-Dichloropropene	ND	53.8	"	**	"	"	"	"	
thylbenzene	ND	53.8	ø		"	"	"	"	

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

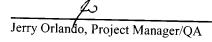
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U07SL (P1G0208-05) Soil					Sampled: 07/0	3/01 Recei	ved: 07/06/	01	
Hexachlorobutadiene	ND	108	ug/kg dry	1	EPA 8260B	07/16/01	07/17/01	1071301	
2-Hexanone	ND	538	"	**	"	"	#	1071301	
Isopropylbenzene	ND	108	**	**	**	ıı	"		
p-Isopropyltoluene	ND	108	**	**	"	"	11	11	
4-Methyl-2-pentanone	ND	269	"	0	**	**	"	**	
Methyl tert-butyl ether	ND	53.8	n	**	**	ıı	,,	. 11	
Methylene chloride	ND	269	"	*1	**	11	11	**	
Naphthalene	ND	108	"			11	**	,,	
n-Propylbenzene	ND	53.8	11	11	**			11	
Styrene	ND	53.8	"	"	"	**	"		
1,1,1,2-Tetrachloroethane	ND	53.8		"	"	"	**	"	
1,1,2,2-Tetrachloroethane	ND	53.8	**	**	"	n,	"		
Tetrachloroethene	ND	53.8	**	11	"	tt	**	**	
Γoluene Γο	ND	53.8	"	ų	"	**	**	**	
1,2,3-Trichlorobenzene	ND	53.8	11	**	"		,,	.,	
1,2,4-Trichlorobenzene	ND	53.8	11	**	"	11	"	,,	
1,1,1-Trichloroethane	ND	53.8		**		**	11	,,	
1,1,2-Trichloroethane	ND	53.8	**	"	"		"		
Trichloroethene	ND	53.8	"		**	**	"	**	
Trichlorofluoromethane	ND	53.8	11	11		0	,,		
1,2,3-Trichloropropane	ND	53.8	"	71	,,	11	**	**	
,2,4-Trimethylbenzene	ND	53.8	"		,,	"	**	**	
,3,5-Trimethylbenzene	ND	53.8	**	**	,,	"	н	"	
Vinyl chloride	ND	53.8	**	11	11	**	"	**	
o-Xylene	ND	53.8	"	**	**	"	"	**	
n,p-Xylene	ND	108	11	**	11	Ħ	"	tr	
Surr: 4-BFB	100 %	70-130							
Surr: 1,2-DCA-d4	78.6 %	70-130							
Surr: Dibromofluoromethane Surr: Toluene-d8	83.6 % 96.6 %	70-130 70-130							

North Creek Analytical - Portland





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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U08SL (P1G0208-06) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/0)1	
Acetone	ND	1440	ug/kg dry	1	EPA 8260B	07/16/01	07/17/01	1071301	
Benzene	ND	57.4	11	"	" "	110/01	0//1//01	10/1301	
Bromobenzene	ND	57.4	u u	**	**	"	"	"	
Bromochloromethane	ND	57.4	**		11	**	**	**	
Bromodichloromethane	ND	57.4	**	11	**	"	ıı	"	
Bromoform	ND	57.4	**	**	n	n.	11	,,	
Bromomethane	ND	287	**	,,	**	n	**	"	
2-Butanone	ND	574	11		"	11	"	"	
n-Butylbenzene	ND	287	"	**	"	,,	"	"	
sec-Butylbenzene	ND	57.4	11	Ħ	**	**	"	"	•
tert-Butylbenzene	ND	57.4	**	"	11	"	**	"	
Carbon disulfide	ND	574	***		11	,,	"	"	
Carbon tetrachloride	ND	57.4	"	**		"	**	11	
Chlorobenzene	ND	57.4	"	**	"	11	**	"	
Chloroethane	ND	57.4	**	"	**			"	
Chloroform	ND	57.4	**	**	**	ш	**	**	
Chloromethane	ND	287	11	**	**	**	*1	,,	
2-Chlorotoluene	ND	57.4	11	"	11	**	"	,,	
4-Chlorotoluene	ND	57.4	*1	"		"	11	"	
1,2-Dibromo-3-chloropropane	ND	287		**	11	**	**	**	
Dibromochloromethane	ND	57.4	11	**	**	**	11	"	
1,2-Dibromoethane	ND	57.4	**	"	11		"		
Dibromomethane	ND	57.4	*1	"	**	"	**	**	
1,2-Dichlorobenzene	ND	57.4	**	**	**	"	11	11	
1,3-Dichlorobenzene	ND	57.4	**	*1	**	11	.,	**	
1,4-Dichlorobenzene	ND	57.4	**		,,	"	"	**	
Dichlorodifluoromethane	ND	287	**	**	**	11	**	**	
1,1-Dichloroethane	ND	57.4	**	Ħ	**	"	*1	11	
1,2-Dichloroethane	ND	57.4	rt .	**	11	**	"	,,	
1,1-Dichloroethene	ND	57.4	**	**	"	"	"		
cis-1,2-Dichloroethene	ND	57.4		**	"	"	#	**	
rans-1,2-Dichloroethene	ND	57.4	н	*1	11	**	n	11	
,2-Dichloropropane	ND	57.4	**	0	**		"		
,3-Dichloropropane	ND	57.4	11	**	n	11	"	,,	
2,2-Dichloropropane	ND	57.4	"	"	"	**	··	"	
,1-Dichloropropene	ND	57.4	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	57.4	"	**	"	"	**	"	
rans-1,3-Dichloropropene	ND	57.4	**	"	11	n	"	"	
Ethylbenzene	ND	57.4 57.4	"	H			" "	"	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Note
01AMA11U08SL (P1G0208-06) Soil					Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Hexachlorobutadiene	ND	115	ug/kg dry	1	EPA 8260B	07/16/01	07/17/01	1071301	
2-Hexanone	ND	574	"	11	"	"	"	10/1301	
Isopropylbenzene	ND	115	n	**	**	,,	"		
p-lsopropyltoluene	ND	115	"	"	*1	"	"	"	
4-Methyl-2-pentanone	ND	287	**	"	"	11	**	**	
Methyl tert-butyl ether	ND	57.4	**	**	**	"	ıı	,,	
Methylene chloride	ND	287	**	11	**	"	n	**	
Naphthalene	ND	115	n	"	**	"	"	**	
n-Propylbenzene	ND	57.4	"	**	#1	"	"	"	
Styrene	ND	57.4	"	**	**	**	"		
1,1,1,2-Tetrachloroethane	ND	57.4	n	"	u	"	11	**	
1,1,2,2-Tetrachloroethane	ND	57.4	11	**	II.	**	**	**	
Tetrachloroethene	ND	57.4	n	**	"	**		11	
Toluene	ND	57.4	"	,,	**	"	"	"	
1,2,3-Trichlorobenzene	ND	57.4	"	11	"	11	**	**	
1,2,4-Trichlorobenzene	ND	57.4	**	**	"	11	"	**	
1,1,1-Trichloroethane	ND	57.4	"	"	"	***	u u	**	
1,1,2-Trichloroethane	ND	57.4	**	0	"	**	**	"	
Trichloroethene	ND	57.4	"	11	**	**	"	,,	
Trichlorofluoromethane	ND	57.4	**	"	11	"	**	11	
1,2,3-Trichloropropane	ND	57.4	**	"	u u	11	**	***	
1,2,4-Trimethylbenzene	ND	57.4	"	**	"	**	"	"	
1,3,5-Trimethylbenzene	ND	57.4	u	Ħ	**	"	n		
Vinyl chloride	ND	57.4	11	u	**	n .	11	tt	
o-Xylene	ND	57.4	11	"		**	**	"	
n,p-Xylene	ND	115	**	"	**	11	"	"	
Surr: 4-BFB	98.4 %	70-130							
Surr: 1,2-DCA-d4	79.9 %	70-130							
Surr: Dibromofluoromethane	83.7 %	70-130							
Surr: Toluene-d8	98.4 %	70-130							

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil				(Sampled: 07/0	3/01 Recei	ived: 07/06/0	n1	
Acetone	ND	4220	ug/kg dry	1	EPA 8260B	07/16/01	07/17/01		
Benzene	ND	169	"	"	EIA 8200B	07/10/01	0//1//01	1071301	
Bromobenzene	ND	169	**	**	**	"		11	
Bromochloromethane	ND	169		**	11	"	**	,,	
Bromodichloromethane	ND	169	11	,,	"	,,	**	"	
Bromoform	ND	169	11	"	"	"	"	,,	
Bromomethane	ND	844	**	**	**	**	"	,,	
2-Butanone	ND	1690	"	*1	"	"	11		
n-Butylbenzene	ND	844	n .	u u	"	"	ш		
sec-Butylbenzene	ND	169	"	**	**	"	"	"	
tert-Butylbenzene	ND	169	n	**	**	"	**	11	
Carbon disulfide	ND	1690	"	**	"	**	"	"	
Carbon tetrachloride	ND	169	"	"	"	,,	"	**	
Chlorobenzene	ND	169	n	**	11		"	"	
Chloroethane	ND	169	"	"	11	n .	n	"	
Chloroform	ND	169	"	**	"	II.		"	
Chloromethane	ND	844		,,	"	**	"	"	
2-Chlorotoluene	ND	169	**	"	"	**	"	,,	
4-Chlorotoluene	ND	169	**	**	**	"	**	,,	
1,2-Dibromo-3-chloropropane	ND	844	*1	11	,,		**	,,	
Dibromochloromethane	ND	169	"	**	"	11	11	"	
1,2-Dibromoethane	ND	169	"	"		"	,,	**	
Dibromomethane	ND	169	**		n	**	,,	"	
1,2-Dichlorobenzene	ND	169	"	**	**	"	,,	11	
1,3-Dichlorobenzene	ND	169	"	**	**	**	**	"	
1,4-Dichlorobenzene	ND	169	"	n	**	**	**	11	
Dichlorodifluoromethane	ND	844	,,	n	**	Ħ	**	"	
1,1-Dichloroethane	ND	169	"	**	,,	"	**	"	
1,2-Dichloroethane	ND	169	"	**	"	,,	**		
1,1-Dichloroethene	ND	169	,,	,,	,,	,,	**		
cis-1,2-Dichloroethene	ND	169		"		11	**		
trans-1,2-Dichloroethene	ND	169	**			11	,,	**	
1,2-Dichloropropane	ND	169	**	**	**	Ħ	"	,,	
1,3-Dichloropropane	ND	169	"	**	*1	0	**	,,	
2,2-Dichloropropane	ND	169				**	"	"	
1,1-Dichloropropene	ND	169	**	11	Ħ	11	n	**	
cis-1,3-Dichloropropene	ND	169	**	**	n	**	**		
trans-1,3-Dichloropropene	ND	169	"	11	"	"	"		
Ethylbenzene	ND	169	**	"	,,	#1	"		

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/0	01	
Hexachlorobutadiene	ND	338	ug/kg dry	1	EPA 8260B	07/16/01	07/17/01	1071301	
2-Hexanone	ND	1690	**	0	"	"	11	"	
Isopropylbenzene	ND	338	**	11	"	11	11	**	
p-Isopropyltoluene	ND	338	**	"	"	Ħ	"	**	
4-Methyl-2-pentanone	ND	844	"	**	11	tt	"	**	
Methyl tert-butyl ether	ND	169	"	**	11	**	"	**	
Methylene chloride	ND	844	**	11	**	"	"		
Naphthalene	ND	338	**	11	11	11	"		
n-Propylbenzene	ND	169	n	11	**	**	n		
Styrene	ND	169	**	u	**	11	n	"	
1,1,1,2-Tetrachloroethane	ND	169	**	"		**	"	**	
1,1,2,2-Tetrachloroethane	ND	169	"	"		"	n	tt	
Tetrachloroethene	ND	169	**	"	0	11	n	**	
Toluene	ND	169	"	**	11	**	ıı .	**	
1,2,3-Trichlorobenzene	ND	169	"	**	**	"	11	**	
1,2,4-Trichlorobenzene	ND	169	**	"	**	**	"	**	
1,1,1-Trichloroethane	ND	169	**	**	11	"	**		
1,1,2-Trichloroethane	ND	169	**	**	11	"	11	**	
Trichloroethene	ND	169	**	11	**	"	"	**	
Trichlorofluoromethane	ND	169	n	"	**	"	"	**	
1,2,3-Trichloropropane	ND	169	Ħ	"	"	11	II.	**	
1,2,4-Trimethylbenzene	ND	169	**	"	**	**	n n	**	
1,3,5-Trimethylbenzene	ND	169	Ħ	**	n	11	"		
Vinyl chloride	ND	169	**	11	**	**	"		
o-Xylene	ND	169	**	**	**	**	**		
m,p-Xylene	ND	338	Ħ	**	"	**	**		
Surr: 4-BFB	97.2 %	70-130							
Surr: 1,2-DCA-d4	79.5 %	70-130							
Surr: Dibromofluoromethane	84.4 %	70-130							
Surr: Toluene-d8	96.2 %	70-130							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

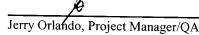
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U10SL (P1G0208-08) Other wet				S	Sampled: 07/0	3/01 Recei	ved: 07/06/0)1	P-02
Acetone	ND	2500	ug/kg wet	1	EPA 8260B	07/16/01	07/17/01	1071301	1 -02
Benzene	ND	100	11	11	11	#	"	"	
Bromobenzene	ND	100	**	**	"	"	11	11	
Bromochloromethane	ND	100	**		**	"	11	#	
Bromodichloromethane	ND	100	**	n	"	**	**	**	
Bromoform	ND	100	11	"	**	"	"	**	
Bromomethane	ND	500	**	**	11	n	**	**	
2-Butanone	ND	1000	"	**	H	**	"	"	
n-Butylbenzene	ND	500	n	**	н	n .	"	"	
sec-Butylbenzene	ND	100	"	"	"	n	**	**	
tert-Butylbenzene	ND	100	"	"	**	**	**	"	
Carbon disulfide	ND	1000	**	**		"	"	"	
Carbon tetrachloride	ND	100	**	11	"	u	,,	"	
Chlorobenzene	ND	100	"	"	n .	"	"	"	
Chloroethane	ND	100	u	"	"	"	**	**	
Chloroform	ND	100	**	11	"	**	**	"	
Chloromethane	ND	500	**	**	,,	"	**		
2-Chlorotoluene	ND	100	*1	**	"	**	,,	"	
4-Chlorotoluene	ND	100	11	"	,,	,,	,,	"	
1,2-Dibromo-3-chloropropane	ND	500	"	"	"	"	**	,,	
Dibromochloromethane	ND	100	**		"	**	**	"	
1,2-Dibromoethane	ND	100	**	**	"	,,		,,	
Dibromomethane	ND	100	**	**				"	
1,2-Dichlorobenzene	ND	100	,,	"		"		**	
1,3-Dichlorobenzene	ND	100		**	**		**	"	
1,4-Dichlorobenzene	ND	100	**	**	"	**	**	,,	
Dichlorodifluoromethane	ND	500	**	**	**	**	,,	"	
1,1-Dichloroethane	ND	100	**	tt	**	**	"		
1,2-Dichloroethane	ND	100	*1	"	"	**	"		
1,1-Dichloroethene	ND	100			"	"	.,		
cis-1,2-Dichloroethene	ND	100	**	"	**	"	,,	**	
rans-1,2-Dichloroethene	ND	100	**	**	**	n	,,	,,	
1,2-Dichloropropane	ND	100		**	"	"	"	"	
1,3-Dichloropropane	ND	100	n		**	**	"	**	
2,2-Dichloropropane	ND	100	tt	**	**	11	"	,,	
1,1-Dichloropropene	ND	100	Ħ	17		"	"	"	
cis-1,3-Dichloropropene	ND	100		"		"	"	"	
rans-1,3-Dichloropropene	ND	100	"	"	 H	" "	" "	**	
Ethylbenzene	ND	100	"	,,	**	,,	"	"	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U10SL (P1G0208-08) Other wet					Sampled: 07/0	3/01 Recei	ved: 07/06/0	D1	P-02
Hexachlorobutadiene	ND	200	ug/kg wet	1	EPA 8260B	07/16/01	07/17/01	1071301	
2-Hexanone	ND	1000	"	u u	"	#	"	"	
Isopropylbenzene	ND	200	"		**	**	n n	"	
p-Isopropyltoluene	ND	200	**	**	**	u	"		
4-Methyl-2-pentanone	ND	500	**	**		11	"	11	
Methyl tert-butyl ether	ND	100	Ħ	**	**	"	H	**	
Methylene chloride	ND	500	"	**	n	**	,,	**	
Naphthalene	ND	200	"	**	**	**	"	**	
n-Propylbenzene	ND	100	n .	tt	0	"		"	
Styrene	ND	100	"	**	11	11	,,	**	
1,1,1,2-Tetrachloroethane	ND	100	"		. ***	n	"	"	
1,1,2,2-Tetrachloroethane	ND	100	"	**	**	. ,,	,,	"	
Tetrachloroethene	ND	100	"	11		"		"	
Toluene	ND	100	n	**		**	**	•	
1,2,3-Trichlorobenzene	ND	100	**	**	**	**	**	**	
1,2,4-Trichlorobenzene	ND	100	**	"	#1	"	"	"	
1,1,1-Trichloroethane	ND	100	Ħ	"	11	**		"	
1,1,2-Trichloroethane	ND	100	**	u	11	u	**		
Trichloroethene	ND	100	**	**	**	**	**	n	
Trichlorofluoromethane	ND	100	**	11	**	**	"	**	
1,2,3-Trichloropropane	ND	100	**	"	,,	**	,,	11	
1,2,4-Trimethylbenzene	ND	100	"	n	"	**	n	,,	
1,3,5-Trimethylbenzene	ND	100	,,	n	n	"	**	11	
Vinyl chloride	ND	100	"	11	"	**	tt	**	
o-Xylene	ND	100		н	**	**	,,	**	
m,p-Xylene	ND	200	**	"	11	**	u	"	
Surr: 4-BFB	NR	70-130				·i			
Surr: 1,2-DCA-d4	NR	70-130							
Surr: Dibromofluoromethane	NR	70-130							
Surr: Toluene-d8	NR	70-130							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Reporting Analyte Result Limit Units Dilution Method Prepared Analyzed Batch Notes 01AMA11U03SL (P1G0208-01) Soil Sampled: 07/03/01 Received: 07/06/01 Acenaphthene ND 13.4 ug/kg dry EPA 8270m 07/12/01 07/17/01 1071164 Acenaphthylene ND 13.4 Anthracene ND 13.4 Benzo (a) anthracene ND 13.4 Benzo (a) pyrene ND 13.4 Benzo (b) fluoranthene ND 13.4 Benzo (ghi) perylene ND 13.4 Benzo (k) fluoranthene ND 13.4 Chrysene ND 13.4 Dibenzo (a,h) anthracene ND 13.4 Fluoranthene ND 13.4 Fluorene ND 13.4 Indeno (1,2,3-cd) pyrene ND 13.4 Naphthalene ND 13.4 Phenanthrene ND 13.4 Pyrene ND 13.4 Surr: Fluorene-d10 83.2 % 40-150

Surr: Pyrene-d10 117% 40-150 Surr: Benzo (a) pyrene-d12 93.3 % 40-150

01AMA11U04SL (P1G0208-02) Soil			ived: 07/06/	01					
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/17/01	1071164	
Acenaphthylene	ND	13.4	"	н	"	"	"	"	
Anthracene	ND	13.4	u u	**	u	11	**	n	
Benzo (a) anthracene	ND	13.4	u u	**	11	***	"	**	
Benzo (a) pyrene	ND	13.4	u u	**	"	**	"	11	
Benzo (b) fluoranthene	ND	13.4	**	"	**	tt	"	**	
Benzo (ghi) perylene	ND	13.4	**		"	**	**	11	
Benzo (k) fluoranthene	ND	13.4	**		"		**	**	
Chrysene	ND	13.4		11	"	u u	"	n	
Dibenzo (a,h) anthracene	ND	13.4	**	**	"	**		n .	
Fluoranthene	ND	13.4	"	**	"	**	**	**	
Fluorene	ND	13.4	"	**	17	"	**	**	
Indeno (1,2,3-cd) pyrene	ND	13.4	••	"	11	Ħ	**	"	
Naphthalene	ND	13.4	11	"	11	"	**	"	
Phenanthrene	ND	13.4	"	"	n n	"	Ħ	**	
Pyrene	ND	13.4	u u	**	**	. 11	"	"	
Surr: Fluorene-d10	79.6 %	40-150							

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

1101 til Creek Analytical - Portland											
Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes		
01AMA11U04SL (P1G0208-02) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01			
Surr: Pyrene-d10	111 %	40-150			<u> </u>	3/01 1000	1ved. 07700/	J1			
Surr: Benzo (a) pyrene-d12	83.9 %	40-150									
01AMA11U05SL (P1G0208-03) Soil				!	Sampled: 07/0	3/01 Rece	ived: 07/06/	1 1			
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01					
Acenaphthylene	ND	13.4	" "	"	E1 A 8270III	07/12/01	07/17/01	1071164			
Anthracene	ND	13.4	"	**	,,		**	"			
Benzo (a) anthracene	ND	13.4	11		**	**	,,	"			
Benzo (a) pyrene	ND	13.4	**	"	*1	**	,,	"			
Benzo (b) fluoranthene	ND	13.4	**	**	*1		,,	"			
Benzo (ghi) perylene	ND	13.4	**	"	,,			"			
Benzo (k) fluoranthene	ND	13.4	"	**		ıı	**	"			
Chrysene	ND	13.4	"	**	Ħ	**	**	"			
Dibenzo (a,h) anthracene	ND	13.4		"	**	"	"	,,			
Fluoranthene	ND	13.4	11		11	11	"	**			
Fluorene	ND	13.4	**	**	"	"	"	**			
Indeno (1,2,3-cd) pyrene	ND	13.4	**	tt	,,		"	"			
Naphthalene	ND	13.4	11	,,	11	Ħ	"	"			
Phenanthrene	ND	13.4	"	"	11	n	"	n.			
Pyrene	ND	13.4	u		11	n	**	**			
Surr: Fluorene-d10	83.9 %	40-150									
Surr: Pvrene-d10	121 %	40-150									
Surr: Benzo (a) pyrene-d12	90.5 %	40-150									
01AMA11U06SL (P1G0208-04) Soil				ç	Sampled: 07/0	3/01 Recei	ved: 07/06/0	11			
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/17/01	1071164			
Acenaphthylene	ND	13.4	"	,	" "	07/12/01	"	"			
Anthracene	ND	13.4	"	*1	**	11	*1	"			
Benzo (a) anthracene	ND	13.4	"	"	**	**	*1	,,			
Benzo (a) pyrene	ND	13.4	"	"	n	**	**	"			
Benzo (b) fluoranthene	ND	13.4	"	"	n	11	,,	**			
Benzo (ghi) perylene	ND	13.4	**	**	"		**	11			
Benzo (k) fluoranthene	ND	13.4		"	**	**	,,				
Chrysene	ND	13.4	**	"	**	,,	,,	11			
Dibenzo (a,h) anthracene	ND	13.4	**	**	"	,,	,,	#			
Fluoranthene	22.0	13.4	"	11	**	n	**	"			
Fluorene	ND	13.4	H	"	"	tt	H	"			
Indeno (1,2,3-cd) pyrene	ND	13.4	**	"	"	**		**			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U06SL (P1G0208-04) Soil	· · · · · · · · · · · · · · · · · · ·				Sampled: 07/0	3/01 Rece	ived: 07/06/	01	· · ·
Naphthalene	ND	13.4	ug/kg dry	1	EPA 8270m	07/12/01	07/17/01	1071164	
Phenanthrene	ND	13.4	"	u	"	"	"	"	
Pyrene	23.5	13.4	"	"	**	**	0	11	
Surr: Fluorene-d10	79.9 %	40-150							
Surr: Pyrene-d10	110 %	40-150							
Surr: Benzo (a) pyrene-d12	87.9 %	40-150							
01AMA11U07SL (P1G0208-05) Soil				;	Sampled: 07/0	3/01 Rece	ived: 07/06/0	01	
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/17/01	07/19/01	1071349	
Acenaphthylene	ND	13.4	"	11	11	**	"	"	
Anthracene	ND	13.4	**	n	*1	**	**	u	
Benzo (a) anthracene	ND	13.4	**	"	11	**	"		
Benzo (a) pyrene	ND	13.4	"	"	**	"	11	**	
Benzo (b) fluoranthene	ND	13.4	"	**	"	11	11	**	
Benzo (ghi) perylene	ND	13.4	n	**	**	"	11	**	
Benzo (k) fluoranthene	ND	13.4	"	"	**		11	*1	
Chrysene	ND	13.4	"	"	**	"	Ħ	"	
Dibenzo (a,h) anthracene	ND	13.4	'n	"	**	11	**	**	
Fluoranthene	ND	13.4	"	**	**	11	u	**	
Fluorene	ND	13.4	"	**	n	"	n	**	
Indeno (1,2,3-cd) pyrene	ND	13.4	"	**	**	11	"		
Naphthalene	ND	13.4	**	"		n	**	11	
Phenanthrene	ND	13.4	"	tt	"	"	"	**	
Pyrene	ND	13.4	u	**	0	"	"	11	
Surr: Fluorene-d10	76.6 %	40-150							
Surr: Pyrene-d10	114 %	40-150							
Surr: Benzo (a) pyrene-d12	90.6 %	40-150							

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U08SL (P1G0208-06) Soil					Sampled: 07/0	3/01 Rece	ived: 07/06/	01	
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/17/01	07/19/01	1071349	
Acenaphthylene	ND	13.4	"	"	11	n	"	"	
Anthracene	ND	13.4	**	"	*1	"	"	**	
Benzo (a) anthracene	ND	13.4	**	"	п	"	**	**	
Benzo (a) pyrene	ND	13.4	"	**	#	11	**	**	
Benzo (b) fluoranthene	ND	13.4		**	Ħ	11	**	**	
Benzo (ghi) perylene	ND	13.4	"	**	Ħ	**	**	**	
Benzo (k) fluoranthene	ND	13.4		"	#	**	"	**	
Chrysene	ND	13.4	u	**	11	**	n	**	
Dibenzo (a,h) anthracene	ND	13.4	u	**	**	**	"	**	
Fluoranthene	ND	13.4	"	**	Ħ	**		11	
Fluorene	ND	13.4	11	*1	**	11	u u	**	
Indeno (1,2,3-cd) pyrene	ND	13.4	u.	11	11	11	11	**	
Naphthalene	ND	13.4	**	11	**	"		**	
Phenanthrene	ND	13.4	н	11	**		11	**	
Pyrene	ND	13.4	**	"	"	"	11	**	
Surr: Fluorene-d10	70.9 %	40-150							
Surr: Pyrene-d10	113 %	40-150							
Surr: Benzo (a) pyrene-d12	85.3 %	40-150							
01AMA11U09SL (P1G0208-07) Soil				9	Sampled: 07/0	3/01 Recei	ived: 07/06/	01	
Acenaphthene	ND	13.4	ug/kg dry	1	EPA 8270m	07/17/01	07/19/01	1071349	
Acenaphthylene	ND	13.4	"		"	11	11	"	
Anthracene	ND	13.4	*1	**	**	**	*1		
Benzo (a) anthracene	ND	13.4	"	**	11	"	**		
Benzo (a) pyrene	ND	13.4	**	#	11	#	**		
Benzo (b) fluoranthene	ND	13.4		**	Ħ	**	ti .		
Benzo (ghi) perylene	ND	13.4	"	11	**	**	"		
Benzo (k) fluoranthene	ND	13.4		**	**	Ħ	11		
Chrysene	ND	13.4	**	**	**	"	*1		
Dibenzo (a,h) anthracene	ND	13.4	**	**	**	**	*1		
Fluoranthene	ND	13.4	**	**	n	"	"	"	
Fluorene	ND	13.4	tt	**	**	**	"	11	
Indeno (1,2,3-cd) pyrene	ND	13.4	**	••		"		**	
Naphthalene	ND	13.4	**	**		"	tt	**	
Phenanthrene	ND	13.4	0	**	"	"	**	11	
Pyrene	ND	13.4	"	**	11	"	11	**	
Surr: Fluorene-d10	61.2 %	40-150							

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U09SL (P1G0208-07) Soil				S	ampled: 07/0	03/01 Rece	ived: 07/06/0	1	
Surr: Pyrene-d10 Surr: Benzo (a) pyrene-d12	98.3 % 71.6 %	40-150 40-150						<u>. </u>	

North Creek Analytical - Portland



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

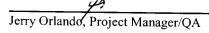
Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Percent Dry Weight (Solids) per Standard Methods North Creek Analytical - Portland

Analyte	Result	Reporting Limit Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
01AMA11U03SL (P1G0208-01) Soil				Sampled: 07/0	03/01 Rece	ived: 07/06/	01	
% Solids	89.5	1.00 % by Weigh:	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U04SL (P1G0208-02) Soil				Sampled: 07/0	03/01 Recei	ived: 07/06/0	01	
% Solids	93.7	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U05SL (P1G0208-03) Soil				Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
% Solids	93.4	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U06SL (P1G0208-04) Soil				Sampled: 07/0	3/01 Recei	ived: 07/06/0	01	
% Solids	85.2	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U07SL (P1G0208-05) Soil				Sampled: 07/0	3/01 Recei	ved: 07/06/0	01	
% Solids	92.6	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U08SL (P1G0208-06) Soil				Sampled: 07/0	3/01 Recei	ved: 07/06/0)1	
% Solids	93.4	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	
01AMA11U09SL (P1G0208-07) Soil				Sampled: 07/0	3/01 Recei	ved: 07/06/0)1	
% Solids	86.4	1.00 % by Weight	1	NCA SOP	07/11/01	07/12/01	1071131	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

North	Creek	Ana	lytical	- Po	rtland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1071199 - EPA 5035			<u> </u>							
Blank (1071199-BLK1)				Prepare	d & Analy	zed: 07/1	2/01			
Gasoline Range Organics	ND	4.00	mg/kg			200. 0771.				
Benzene	ND	0.100	"							
Toluene	ND	0.100	u							
Ethylbenzene	ND	0.100	**							
Xylenes (total)	ND	0.100	**							
Surr: a,a,a-TFT (FID)	3.03		"	2.50		121	60-140			
Surr: a,a,a-TFT (PID)	2.39		"	2.50		95.6	60-140			
LCS (1071199-BS1)				Prepare	d & Analy	zed: 07/12	2/01			
Gasoline Range Organics	66.3	4.00	mg/kg	62.5		106	70-120			
Surr: a,a,a-TFT (FID)	3.43		"	2.50		137	60-140			
LCS (1071199-BS2)				Prepare	d & Analy	zed: 07/12	2/01			
Benzene	0.872	0.100	mg/kg	1.00		87.2	70-120			
Toluene	0.818	0.100	"	1.00		81.8	70-120			
Ethylbenzene	0.822	0.100	**	1.00		82.2	70-120			
Xylenes (total)	2.58	0.100	**	3.00		86.0	70-120			
Surr: a,a,a-TFT (PID)	2.40		"	2.50		96.0	60-140			
LCS Dup (1071199-BSD1)				Prepare	d & Analy	zed: 07/12	2/01			
Gasoline Range Organics	64.6	4.00	mg/kg	62.5		103	70-120	2.60	20	
Surr: a,a,a-TFT (FID)	3.34		"	2.50		134	60-140			
LCS Dup (1071199-BSD2)				Prepare	d & Analy	zed: 07/12	2/01			
Benzene	0.900	0.100	mg/kg	1.00	· · · · · ·	90.0	70-120	3.16	200	
Toluene	0.839	0.100	**	1.00		83.9	70-120	2.53	200	
Ethylbenzene	0.832	0.100	Ħ	1.00		83.2	70-120	1.21	200	

0.100

2.60

2.54

3.00

2.50

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70-120

60-140

0.772

200

86.7

102



Xylenes (total)

Surr: a,a,a-TFT (PID)



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Gasoline Range Organics (n-Hexane to <n-Decane) and BTEX per AK101 and EPA 8021B - Quality Control

<u>North</u>	Creek A	Analytical	-]	Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
								101 2	T111111	NOICS

Batch 1071199 - EPA 5035

Duplicate (1071199-DUP1)	Sour	Source: P1G0208-01			Prepared & Analyzed: 07/12/01					
Gasoline Range Organics	ND	3.35 mg/kg dry		ND			0.388	50		
Surr: a,a,a-TFT (FID)	10.9	11	9.74		112	60-140				
Duplicate (1071199-DUP2)	Source: P1G0210-01		Prepared & Analyzed: 07/12/01							
Gasoline Range Organics	ND	4.93 mg/kg dry		ND				50		
Surr: a,a,a-TFT (FID)	15.7	"	13.8		114	60-140				

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/103 - Quality Control

North_	<u>Creek</u>	<u>Anal</u>	ytical	- P	<u>'ortlar</u>	ıd

Analyte	Result	Reporting Limit	Units	Spike	Source	0/000	%REC		RPD	
D. (1) 1051010 TD. (1)	resuit	Lillit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071212 - EPA 3550 Fuels				-,-						
Blank (1071212-BLK1)				Prepare	d: 07/12/0	1 Analyz	ed: 07/14/0	1		
Diesel Range Organics	ND	25.0	mg/kg			<u> </u>	07/14/			
Residual Range Organics	ND	50.0	"							
Surr: 1-Chlorooctadecane	3.88		"	4.80		80.8	75-125			
Surr: Triacontane	6.77		"	6.25		108	50-150			
LCS (1071212-BS1)				Prepare	d: 07/12/0	1 Analyz	ed: 07/14/0)1		
Diesel Range Organics	116	25.0	mg/kg	129		89.9	60-130			
Residual Range Organics	81.7	50.0	"	79.0		103	60-130			
Surr: 1-Chlorooctadecane	3.56		"	4.80		74.2	75-125			S-02
Surr: Triacontane	6.75		" .	6.25		108	50-150			5-07
LCS Dup (1071212-BSD1)				Prepare	d: 07/12/0	1 Analyz	ed: 07/14/0)1		
Diesel Range Organics	112	25.0	mg/kg	129		86.8	60-130	3.51	20	
Residual Range Organics	78.6	50.0	11	79.0		99.5	60-130	3.87	20	
Surr: 1-Chlorooctadecane	3.59		"	4.80		74.8	75-125			S-07
Surr: Triacontane	6.57		"	6.25		105	50-150			5 07
Duplicate (1071212-DUP1)	Sou	rce: P1G020	08-01	Prepared: 07/12/01 Analyzed: 07/16/01						
Diesel Range Organics	92.2	25.0	mg/kg dry		158			52.6	50	Q-14
Residual Range Organics	ND	50.0	"		ND			0.00	50	-
Surr: 1-Chlorooctadecane	4.78		"	5.36		89.2	75-125			
Surr: Triacontane	8.25		"	6.98		118	50-150			
Duplicate (1071212-DUP2)	Sou	rce: P1G02	10-05	Prepared	d: 07/12/0	1 Analyz	ed: 07/16/0)1		
Diesel Range Organics	ND	25.0	mg/kg dry		ND				50	
Residual Range Organics	88.9	50.0	"		174			64.7	50	Q-14
Surr: 1-Chlorooctadecane	3.66		"	5.40		67.8	75-125			S-07
Surr: Triacontane	6.49		"	7.03		92.3	50-150			

North Creek Analytical - Portland

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North Creek Analytical, Inc. **Environmental Laboratory Network**



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Prepared: 07/19/01 Analyzed: 07/26/01

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North (Creek	Analyt	tical -	Portland

A1 .4		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 1071443 -	- EPA 3050
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Dialik (10/1443-BLK1)			
Arsenic	ND	0.500	mg/kg
Barium	ND	1.00	"
Cadmium	ND	0.500	n
Chromium	ND	0.500	11
Lead	ND	0.500	"
Nickel	ND	1.00	"
Vanadium	ND	2.50	11

LCS (1071443-BS1)				Prepared: 07/19/01	01 Analyzed: 07/26/0		
Arsenic	12.0	0.500	mg/kg	10.0	120	80-120	
Barium	10.6	1.00	"	10.0	106	80-120	
Cadmium	10.8	0.500	11	10.0	108	80-120	
Chromium	9.62	0.500	"	10.0	96.2	80-120	
Lead	9.46	0.500	"	10.0	94.6	80-120	
Nickel	10.9	1.00	"	10.0	109	80-120	
Vanadium	9.26	2.50	"	10.0	92.6	80-120	

Duplicate (1071443-DUP1)	Sour	ce: P1G0533-01	Prepared: 07/19/01 Analyze	ed: 07/26/01	
Arsenic	9.07	0.500 mg/kg dry	9.19	1.31 4	0
Barium	105	1.00 "	111	5.56 4	0
Cadmium	ND	0.500 "	ND	4	0
Chromium	10.3	0.500 "	11.9	14.4 4	0
Lead	7.85	0.500 "	7.99	1.77 4	0
Nickel	14.8	1.00 "	15.1	2.01 4	0
Vanadium	52.7	2.50 "	55.4	5.00 4	0

Matrix Spike (1071443-MS1)	Soui	rce: P1G05	533-01	Prepare	d: 07/19/0	1 Analyz	zed: 07/26/01	
Arsenic	23.3	0.500	mg/kg dry	10.9	9.19	129	75-125	Q-02
Barium	122	1.00	"	10.9	111	101	75-125	
Cadmium	11.4	0.500	**	10.9	ND	105	75-125	
Chromium	22.8	0.500	**	10.9	11.9	100	75-125	
Lead	17.9	0.500	**	10.9	7.99	90.9	75-125	
Nickel	27.7	1.00	"	10.9	15.1	116	75-125	
Vanadium	69.1	2.50	n	10.9	55.4	126	75-125	Q-02

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Jerry Orlando, Project Manager/QA

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090

Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Total Metals per EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Portland

Analyte	ъ .	Reporting		Spike	Source		%REC		RPD	
Titulyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1071443 - EPA 3050

Matrix Spike (1071443-MS2)	Sour	ce: P1G02	207-01	Prepare	ed: 07/19/0	1 Analyz	zed: 07/26/01	
Arsenic	6.06	0.500	mg/kg dry	11.2	2.32	33.4	75-125	Q-02
Barium	26.6	1.00	"	11.2	12.2	129	75-125	Q-02 Q-02
Cadmium	12.2	0.500	"	11.2	ND	109	75-125	Q-02
Chromium	33.2	0.500	**	11.2	11.7	192	75-125 75-125	Q-02
Lead	11.7	0.500	"	11.2	0.902	96.4	75-125	Q-02
Nickel	27.2	1.00		11.2	11.9	137	75-125 75-125	0.02
Vanadium	111	2.50	n	11.2	55.6	NR	75-125 75-125	Q-02 Q-14

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polychlorinated Biphenyls per EPA Method 8082 - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
D										

Batch	<u> 10/1259 -</u>	EPA 3550

Blank (1071259-BLK1)				Prenare	d· 07/14/0)1 Angly	zed: 07/18/	<u> </u>		
Aroclor 1016	ND	67.0	ug/kg	Tropare	G. 07/14/(Allaly	LCU. 07/10/	<i>O</i> 1		
Aroclor 1221	ND	134	""							
Aroclor 1232	ND	67.0	"							
Aroclor 1242	ND	67.0	"							
Aroclor 1248	ND	67.0	Ħ							
Aroclor 1254	ND	67.0	**							
Aroclor 1260	ND	67.0	Ħ							
Surr: 2,4,5,6-Tetrachloro-m-xylene	31.7		"	33.3		95.2	63-119			
Surr: Decachlorobiphenyl	36.5		"	33.3		110	52-131			
LCS (1071259-BS1)	_			Prepare	d: 07/14/0	l Analyz	zed: 07/18/0)1		
Aroclor 1016	367	67.0	ug/kg	333		110	57-132			
Aroclor 1260	360	67.0	**	333		108	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	35.0		"	33.3		105	63-119			
Surr: Decachlorobiphenyl	41.0		"	33.3		123	52-131			
Matrix Spike (1071259-MS1)	Sour	ce: P1G020	08-01	Prepare	d: 07/14/0)1 Analyz	zed: 07/18/0	01		
Aroclor 1016	323	67.0	ug/kg dry	372	ND	86.8	57-132			
Aroclor 1260	359	67.0	"	372	ND	96.5	60-136			
Surr: 2,4,5,6-Tetrachloro-m-xylene	29.8		"	37.2		80.1	63-119			
Surr: Decachlorobiphenyl	40.0		n	37.2		108	52-131			
Matrix Spike Dup (1071259-MSD1)	Sour	ce: P1G020	08-01	Prepare	d: 07/14/0	1 Analyz	ed: 07/18/0)1		
Aroclor 1016	340	67.0	ug/kg dry	372	ND	91.4	57-132	5.13	50	
Aroclor 1260	370	67.0	u	372	ND	99.5	60-136	3.02	50	
Surr: 2,4,5,6-Tetrachloro-m-xylene	31.0		"	37.2		83.3	63-119			
Surr: Decachlorobiphenyl	40.5		"	37.2		109	52-131			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

Batch 1071301 - EPA 5035

Anchorage, AK 99502-1116

Blank (1071301-BLK1)				Prepared & Analyzed: 07/16/01
Acetone	ND	25.0	ug/kg	110ршов се гланугов. 07/10/01
Benzene	ND	1.00	"	
Bromobenzene	ND	1.00	**	
Bromochloromethane	ND	1.00	n	
Bromodichloromethane	ND	1.00	11	
Bromoform	ND	1.00	**	
Bromomethane	ND	5.00	11	
2-Butanone	ND	10.0	"	
n-Butylbenzene	ND	5.00	**	
sec-Butylbenzene	ND	1.00	**	
tert-Butylbenzene	ND	1.00	**	
Carbon disulfide	ND	10.0	"	
Carbon tetrachloride	ND	1.00		
Chlorobenzene	ND	1.00		
Chloroethane	ND	1.00	Ħ	
Chloroform	ND	1.00	**	
Chloromethane	ND	5.00	*1	
2-Chlorotoluene	ND	1.00	"	
4-Chlorotoluene	ND	1.00	11	
1,2-Dibromo-3-chloropropane	ND	5.00	**	
Dibromochloromethane	ND	1.00	n	
1,2-Dibromoethane	ND	1.00	"	
Dibromomethane	ND	1.00	•	
1,2-Dichlorobenzene	ND	1.00	"	
1,3-Dichlorobenzene	ND	1.00	11	
1,4-Dichlorobenzene	ND	1.00	**	
Dichlorodifluoromethane	ND	5.00	tı	
1,1-Dichloroethane	ND	1.00	11	
1,2-Dichloroethane	ND	1.00		
1,1-Dichloroethene	ND	1.00	n	
cis-1,2-Dichloroethene	ND	1.00	**	
trans-1,2-Dichloroethene	ND	1.00	**	
1,2-Dichloropropane	ND	1.00	"	
1,3-Dichloropropane	ND	1.00	"	
2,2-Dichloropropane	ND	1.00	"	
1,1-Dichloropropene	ND	1.00	"	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

					/I tlallu						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	

Batch	1071301	- EPA	5035
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Blank (1071301-BLK1)				Prepared & Analyzed: 07/16/01
cis-1,3-Dichloropropene	ND	1.00	ug/kg	1 10paiou & Allaty254. 0//10/01
trans-1,3-Dichloropropene	ND	1.00	"	
Ethylbenzene	ND	1.00	"	
Hexachlorobutadiene	ND	2.00	**	
2-Hexanone	ND	10.0		
sopropylbenzene	ND	2.00	11	
o-Isopropyltoluene	ND	2.00	**	
4-Methyl-2-pentanone	ND	5.00	**	
Methyl tert-butyl ether	ND	1.00	n	
Methylene chloride	ND	5.00	,,	
Naphthalene	ND	2.00	"	
n-Propylbenzene	ND	1.00	**	
Styrene	ND	1.00	u u	
,1,1,2-Tetrachloroethane	ND	1.00	n	
,1,2,2-Tetrachloroethane	ND	1.00	**	
etrachloroethene	ND	1.00	"	
oluene	ND	1.00	"	
,2,3-Trichlorobenzene	ND	1.00	**	
,2,4-Trichlorobenzene	ND	1.00	"	
,1,1-Trichloroethane	ND	1.00	"	
,1,2-Trichloroethane	ND	1.00	"	
Frichloroethene	ND	1.00	"	
Frichlorofluoromethane	ND	1.00	**	
,2,3-Trichloropropane	ND	1.00	**	
,2,4-Trimethylbenzene	ND	1.00	**	
,3,5-Trimethylbenzene	ND	1.00	"	
/inyl chloride	ND	1.00		
o-Xylene	ND	1.00	n	
n,p-Xylene	ND	2.00	**	
Surr: 4-BFB	19.6		"	20.0 98.0 70-130
Surr: 1,2-DCA-d4	16.8		"	20.0 84.0 70-130
Surr: Dibromofluoromethane	17.2		"	20.0 86.0 70-130
Surr: Toluene-d8	19.2		"	20.0 96.0 70-130

North Creek Analytical - Portland

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Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North	Creek	Analy	rtical -	Portland

A1		Reporting		Spike	Source		%REC		DDD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	RPD Limit	Notes	
D-4-1 1051204 PD									Limit	Notes	

Prepare 20.4 1.00 ug/kg 20.0 102 80-135 1.00 1.	Batch 1071301 - EPA 5035									
1.00	LCS (1071301-BS1)				Prepare	ed & Anal	vzed: 07/	16/01		
19.9 1.00 " 20.0 99.5 80.135 1.01 1	Benzene	20.4	1.00	ug/kg		d & Allai				
		19.9	1.00	~ ~						
Trickloroethene		18.7	1.00	**						
Trichlorocthene 20.1 1.00 " 20.0 100 70-135	Toluene	21.0	1.00	11						
Surr: 4-BFB 20.5	Trichloroethene	20.1	1.00	11						
17.4 " 20.0 87.0 70-130 800 800 70-130 800 800 70-130 800 800 800 70-130 800	Surr: 4-BFB	20.5		"						
18.4 " 20.0 92.0 70-130 70-	Surr: 1,2-DCA-d4	17.4		"						
Surr: Toluene-d8 18.9 " 20.0 94.5 70-130	Surr: Dibromofluoromethane			"						
Prepared & Analyzed: 07/16/01 Senzene 20.3 1.00 ug/kg 20.0 102 80-135 0.491 25 25 25 25 25 25 25 2	Surr: Toluene-d8	18.9		"						
Senzene 20.3 1.00 ug/kg 20.0 102 80-135 0.491 25 25 25 25 25 25 25 2	LCS Dup (1071301-BSD1)					d & Anals				
Chlorobenzene 19.7 1.00 " 20.0 98.5 80-135 1.01 25 1.01 25 1.01 1.01 1.01 1.01 1.01 1.01 1.01 1.0	Benzene	20.3	1.00	ug/kg		d & Allary			0.401	
1-Dichloroethene 18.8 1.00 " 20.0 94.0 60-150 0.533 25 1.01 25 1.0	Chlorobenzene	19.7		• •						
Toluene 20.7 1.00 " 20.0 104 80-130 1.44 25 1.50 25 1.50 1.50 25 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.5	1,1-Dichloroethene			**						
Trichloroethene 19.8 1.00 " 20.0 99.0 70-135 1.50 25 Surr: 4-BFB 20.5 " 20.0 102 70-130 Surr: 1,2-DCA-d4 17.3 " 20.0 86.5 70-130 Surr: Dibromofluoromethane 18.5 " 20.0 92.5 70-130 Surr: Toluene-d8 18.9 " 20.0 94.5 70-130 Matrix Spike (1071301-MS1) Source: P1G0208-01 Prepared & Analyzed: 07/16/01 Senzene 1810 83.7 " 1870 ND 96.8 60-135 Chlorobenzene 1760 83.7 " 1870 ND 94.1 65-125 J-Dichloroethene 1870 83.7 " 1870 ND 100 60-135 Toluene 1870 83.7 " 1870 ND 100 60-125 Trichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Trichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Turr: 4-BFB 19.5 " 18.7 104 70-130 Turr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Turr: 1,2-DCA-d4 16.9 " 18.7 90.4 70-130 Turr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 Turr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Toluene			**						
Surr: 4-BFB Surr: 1,2-DCA-d4 Surr: Dibromofluoromethane Surr: Dibromofluoromethane Surr: Dibromofluoromethane Surr: Dibromofluoromethane Surr: Dibromofluoromethane Surr: Toluene-d8 Surr: Dibromofluoromethane Surr: Toluene-d8 Surr: P1G0208-01 Source: P1G0208-01 Surre: P1G0208-01 Sur	Trichloroethene	19.8								
Furr: 1,2-DCA-d4 Furr: Dibromofluoromethane 18.5 Furr: Dibromofluoromethane 18.5 Furr: Dibromofluoromethane 18.5 Furr: Dibromofluoromethane 18.9 Furr: Dibromofluoromethane 18.0 Furr: Dibromofluoromethane 18.7 Furr: Dibromofluoromethane	Surr: 4-BFB	20.5		"	20.0		102			
Furr: Toluene-d8 18.5 " 20.0 92.5 70-130 18.9 " 20.0 94.5 70-130 18.9 " 20.0 94.5 70-130 18.9 " 20.0 94.5 70-130 18.9 " 20.0 94.5 70-130 18.9 " 20.0 94.5 70-130 18.9 " 20.0 94.5 70-130 18.9	Surr: 1,2-DCA-d4	17.3		"						
Gurr: Toluene-d8 18.9 " 20.0 94.5 70-130 Matrix Spike (1071301-MS1) Source: P1G0208-01 Prepared & Analyzed: 07/16/01 Benzene 1810 83.7 ug/kg dry 1870 ND 96.8 60-135 Chlorobenzene 1760 83.7 " 1870 ND 94.1 65-125 Al-Dichloroethene 1870 83.7 " 1870 ND 100 60-135 Foluene 1870 83.7 " 1870 ND 100 60-125 Grichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Gurr: 4-BFB 19.5 " 18.7 104 70-130 Gurr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Gurr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Surr: Dibromofluoromethane	18.5		"						
Benzene 1810 83.7 ug/kg dry 1870 ND 96.8 60-135 Chlorobenzene 1760 83.7 " 1870 ND 94.1 65-125 ,1-Dichloroethene 1870 83.7 " 1870 ND 100 60-135 Coluene 1870 83.7 " 1870 ND 100 60-125 Crichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Curr: 4-BFB 19.5 " 18.7 104 70-130 Curr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Curr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Surr: Toluene-d8	18.9		"						
Benzene 1810 83.7 ug/kg dry 1870 ND 96.8 60-135 Chlorobenzene 1760 83.7 " 1870 ND 94.1 65-125 ,1-Dichloroethene 1870 83.7 " 1870 ND 100 60-135 Coluene 1870 83.7 " 1870 ND 100 60-125 Crichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Curr: 4-BFB 19.5 " 18.7 104 70-130 Curr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Curr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Matrix Spike (1071301-MS1)	Sour	ce: P1G020	08-01	Prepare	d & Analy	zed: 07/1	6/01		
Chlorobenzene 1760 83.7 " 1870 ND 94.1 65-125 ,1-Dichloroethene 1870 83.7 " 1870 ND 100 60-135 Coluene 1870 83.7 " 1870 ND 100 60-125 Crichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Curr: 4-BFB 19.5 " 18.7 104 70-130 Curr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Curr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 Curr Talent 18	Benzene									
1870 83.7 1870 ND 100 60-135	Chlorobenzene	1760								
Toluene 1870 83.7 " 1870 ND 100 60-125 1730 83.7 " 1870 ND 92.5 60-125 1870 ND 92.5 60-125 1877 1870 ND 92.5 60-125 1877 1877 104 70-130 1877 1877 1877 1877 1877 1877 1877 187	,1-Dichloroethene	1870	83.7	"						
Trichloroethene 1730 83.7 " 1870 ND 92.5 60-125 Furr: 4-BFB 19.5 " 18.7 104 70-130 Furr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 Furr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Toluene	1870	83.7	"	1870					
Furr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 (arr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 (arr: Dibromofluoromethane 18.7 " 1	Trichloroethene	1730	83.7	"						
Furr: 1,2-DCA-d4 15.7 " 18.7 84.0 70-130 (arr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 (arr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 (arr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130 (arr: Dibromofluoromethane 18.7 90.4 90.4 90.4 90.4 90.4 90.4 90.4 90.4	Surr: 4-BFB	19.5		"	18.7		104	70-130		
furr: Dibromofluoromethane 16.9 " 18.7 90.4 70-130	Surr: 1,2-DCA-d4	15.7		"	18.7					
$T_{\rm col}$, $T_{\rm col}$, $T_{\rm col}$	Surr: Dibromofluoromethane	16.9		"						
	Surr: Toluene-d8	17.9		"						

North Creek Analytical - Portland



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%REC

70-130

70-130

70-130

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Analyte

Surr: Dibromofluoromethane

Surr: Toluene-d8

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Spike

Level

18.7

18.7

Source

82.9

89.3

95.7

Reported: 07/31/01 12:31

RPD

Volatile Organic Compounds per EPA Method 8260B - Quality Control

North Creek Analytical - Portland

Units

Reporting

Limit

Result

16.7

17.9

. mary to	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1071301 - EPA 5035	_									
Matrix Spike Dup (1071301-MSD1)	Sour	ce: P1G02	208-01	Prepare	d & Analy	zed: 07/10	6/01			
Benzene	1890	83.7	ug/kg dry	1870						
Chlorobenzene	1830	83.7	ug/kg ury		ND	101	60-135	4.32	25	
1,1-Dichloroethene			"	1870	ND	97.9	65-125	3.90	25	
	1950	83.7	11	1870	ND	104	60-135	4.19	25	
Toluene	1960	83.7	*1	1870	ND	105	60-125			
Trichloroethene	1820		**				00-125	4.70	25	
	1820	83.7	**	1870	ND	97.3	60-125	5.07	25	
Surr: 4-BFB	19.3		"	18.7		103	70-130			
Surr: 1,2-DCA-d4	15.5		"	18.7		82 Q	70-130 70-130			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported:

07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North Creek Analytical - Portland

Analyte	Daniele	Reporting		Spike	Source		%REC		RPD		Ì
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	ı

Batch 1071164 - EPA 3550	Batch	1071	164 -	EPA	3550
--------------------------	-------	------	-------	-----	------

Blank (1071164-BLK1)				Prepared: 07	7/12/01 Analyz	zed: 07/16/01	
Acenaphthene	ND	13.4	ug/kg	Trepared. 07	/12/01 Analyz	seu. 07/10/01	
Acenaphthylene	ND	13.4	"				
Anthracene	ND	13.4	**				
Benzo (a) anthracene	ND	13.4	**				
Benzo (a) pyrene	ND	13.4					
Benzo (b) fluoranthene	ND	13.4	n				
Benzo (ghi) perylene	ND	13.4	"				
Benzo (k) fluoranthene	ND	13.4	"				
Chrysene	ND	13.4	"				
Dibenzo (a,h) anthracene	ND	13.4	**				
Fluoranthene	ND	13.4	н				
Fluorene	ND	13.4	n				
ndeno (1,2,3-cd) pyrene	ND	13.4	"				
Naphthalene	ND	13.4	**				
Phenanthrene	ND	13.4	**				
Pyrene	ND	13.4	"				
Surr: Fluorene-d10	66,9		"	83.3	80.3	40-150	
Surr: Pyrene-d10	96.5		"	83.3	116	40-150	
Surr: Benzo (a) pyrene-d12	72.5		"	83.3	87.0	40-150	
LCS (1071164-BS1)				Prepared: 07	/12/01 Analyz	ed: 07/16/01	
Acenaphthene	125	13.4	ug/kg	167	74.9	33-139	
Benzo (a) pyrene	141	13.4	"	167	84.4	45-149	
Pyrene	150	13.4	11	167	89.8	39-138	
Surr: Fluorene-d10	66.4		"	83.3	79.7	40-150	
Surr: Pyrene-d10	97.1		"	83.3	117	40-150	
Surr: Benzo (a) pyrene-d12	74.3		"	83.3	89.2	40-150	

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North (Creek	Analy	tical -	Portland
				_ 01 010011 04

Analyte	D 1:	Reporting		Spike	Source		%REC		RPD	
. many to	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1071164 - EPA 3550

Matrix Spike (1071164-MS1)	Sour	ce: P1G0	123-17	Prenare	d· 07/12/0	1 Analy	zed: 07/16/01		
Acenaphthene	152	67.0		193	ND	74.2	33-139	 	R-05
Benzo (a) pyrene	180	67.0	00,	193	ND	93.3	45-149		
Pyrene	204	67.0	"	193	ND	101	39-138		
Surr: Fluorene-d10	77.8		"	96.3		80.8	40-150	 	
Surr: Pyrene-d10	124		"	96.3		129	40-150		
Surr: Benzo (a) pyrene-d12	93.2		"	96.2		96.9	40-150		
Matrix Spike Dup (1071164-MSD1)	Sour	ce: P1G01	123-17	Prepare	d: 07/12/0	1 Analy	zed: 07/16/01		R-05
Acenaphthene	169	67.0	110/kg dry	193	ND	92.0	22 120 10	 (0	

Matrix Spike Dup (1071164-MSD1)	Source: P1G0123-17			Prepared: 07/12/01 Analyzed: 07/16/01						R-05
Acenaphthene	169	67.0	ug/kg dry	193	ND	83.0	33-139	10.6	60	
Benzo (a) pyrene	194	67.0	"	193	ND	101	45-149	7.49	60	
Pyrene	219	67.0	**	193	ND	109	39-138	7.09	60	
Surr: Fluorene-d10	92.4		"	96.3		96.0	40-150			
Surr: Pyrene-d10	137		"	96.3		142	40-150			
Surr: Benzo (a) pyrene-d12	101		"	96.2		105	40-150			

Batch 1071349 - EPA 3550

Blank (1071349-BLK1)				Prepared: 07/17/01 Analyzed: 07/19/01
Acenaphthene	ND	13.4	ug/kg	Parameter interpretation (1970)
Acenaphthylene	ND	13.4	"	
Anthracene	ND	13.4	**	
Benzo (a) anthracene	ND	13.4	"	
Benzo (a) pyrene	ND	13.4	"	
Benzo (b) fluoranthene	ND	13.4	**	
Benzo (ghi) perylene	ND	13,4	**	
Benzo (k) fluoranthene	ND	13,4	**	
Chrysene	ND	13.4	11	
Dibenzo (a,h) anthracene	ND	13.4		
Fluoranthene	ND	13.4	11	
Fluorene	ND	13.4	"	
Indeno (1,2,3-cd) pyrene	ND	13.4	**	
Naphthalene	ND	13.4	11	
Phenanthrene	ND	13.4	"	
Pyrene	ND	13.4	"	
Surr: Fluorene-d10	62.7		"	83.3 75.3 40-150
Surr: Pyrene-d10	81.5		"	83.3 97.8 40-150

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Orlando, Project Manager/QA



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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Quality Control

North Creek Analytical - Portland

Analyte	Result	Reporting Limit	Llmita	Spike	Source	A/PEC	%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch	10	7	1349	- E1	'A	3550)
	_	_					

Blank (1071349-BLK1)				Prepared: 07/17/01 Analyzed: 07/19/01						
Surr: Benzo (a) pyrene-d12	70.1		ug/kg	83.3		84.2	40-150			
LCS (1071349-BS1)				Prepare	d: 07/17/0)1 Analyz	zed: 07/19/	01		
Acenaphthene	130	13.4	ug/kg	167		77.8	33-139			
Benzo (a) pyrene	142	13.4	11	167		85.0	45-149			
Pyrene	139	13.4	**	167		83.2	39-138			
Surr: Fluorene-d10	65.2		"	83.3	-	78.3	40-150			
Surr: Pyrene-d10	84.7		"	83.3		102	40-150			
Surr: Benzo (a) pyrene-d12	75.2		"	83.3		90.3	40-150			
Matrix Spike (1071349-MS1)	Source: P1G0206-01			Prepared: 07/17/01 Analyzed: 07/19/01						
Acenaphthene	143	13.4	ug/kg dry	189	ND	75.7	33-139			
Benzo (a) pyrene	165	13.4	"	189	ND	87.3	45-149			
Pyrene	156	13.4	"	189	ND	82.5	39-138			
Surr: Fluorene-d10	139		"	94.4		147	40-150			A-01
Surr: Pyrene-d10	177		"	94.4		188	40-150			A-01
Surr: Benzo (a) pyrene-d12	164		"	94.3		174	40-150			A-01
Matrix Spike Dup (1071349-MSD1)	Source: P1G0206-01			Prepared: 07/17/01 Analyzed: 07/19/01						
Acenaphthene	126	13.4	ug/kg dry	189	ND	66.7	33-139	12.6	60	
Benzo (a) pyrene	166	13.4	"	189	ND	87.8	45-149	0.604	60	
Pyrene	156	13.4	"	189	ND	82.5	39-138	0.00	60	
Surr: Fluorene-d10	65.7		"	94.4		69.6	40-150			
Surr: Pyrene-d10	92.3		"	94.4		97.8	40-150			
Surr: Benzo (a) pyrene-d12	86.4		"	94.3		91.6	40-150			

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090

Reported:

Project Manager: Anne Krarawetter

07/31/01 12:31

Percent Dry Weight (Solids) per Standard Methods - Quality Control

North Creek Analytical - Portland

				on oncorne										
Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes					
Batch 1071131 - Dry Weight														
Duplicate (1071131-DUP1)	Sour	ce: P1G0120-01	Prepare	d: 07/11/0	1 Analyz	ed: 07/12/0	01							
% Solids	86.7	1.00% by Weight		87.2			0.575	20						
Duplicate (1071131-DUP2)	Sour	ce: P1G0120-02	Prepare	d: 07/11/0	1 Analyz	ed: 07/12/	01							
% Solids	77.5	1.00 % by Weight		74.5			3.95	20						
Duplicate (1071131-DUP3)	Sour	ce: P1G0120-03	Prepare	d: 07/11/0	l Analyz	ed: 07/12/	01							
% Solids	73.4	1.00 % by Weight		76.1	·		3.61	20						
Duplicate (1071131-DUP4)	Sour	Prepared: 07/11/01 Analyzed: 07/12/0				01								
% Solids	98.6	1.00 % by Weight	•	98.9	<u>.</u>		0.304	20						
Duplicate (1071131-DUP5)	Sour	ce: P1G0064-04	Prepare	d: 07/11/0	1 Analyz	ed: 07/12/	01							
% Solids	95.1	1.00 % by Weight		95.2			0.105	20						

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Bristol Environmental & Engineering 2000 W. International Airport Rd. #C-1 Anchorage, AK 99502-1116

Project: Amchitka

Project Number: 210901, PO# 21090 Project Manager: Anne Krarawetter

Reported: 07/31/01 12:31

Notes and Definitions

A-01	Suspected double surrogate added during extraction.
P-02	Results reported on 'As Received' basis.
Q-02	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
Q-06	Analyses are not controlled on RPD values from sample concentrations less than 5 times the reporting limit.
Q-14	The Spike Recovery and/or RPD is outside of control limits due to a non-homogeneous sample matrix.
R-05	Reporting limits raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
S-07	Surrogate recovery is out of control limits. QA criteria are met when one surrogate is within control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
wet	Sample results reported on a wet weight basis (as received)
RPD	Relative Percent Difference

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Jerry Orlando, Project Manager/QA